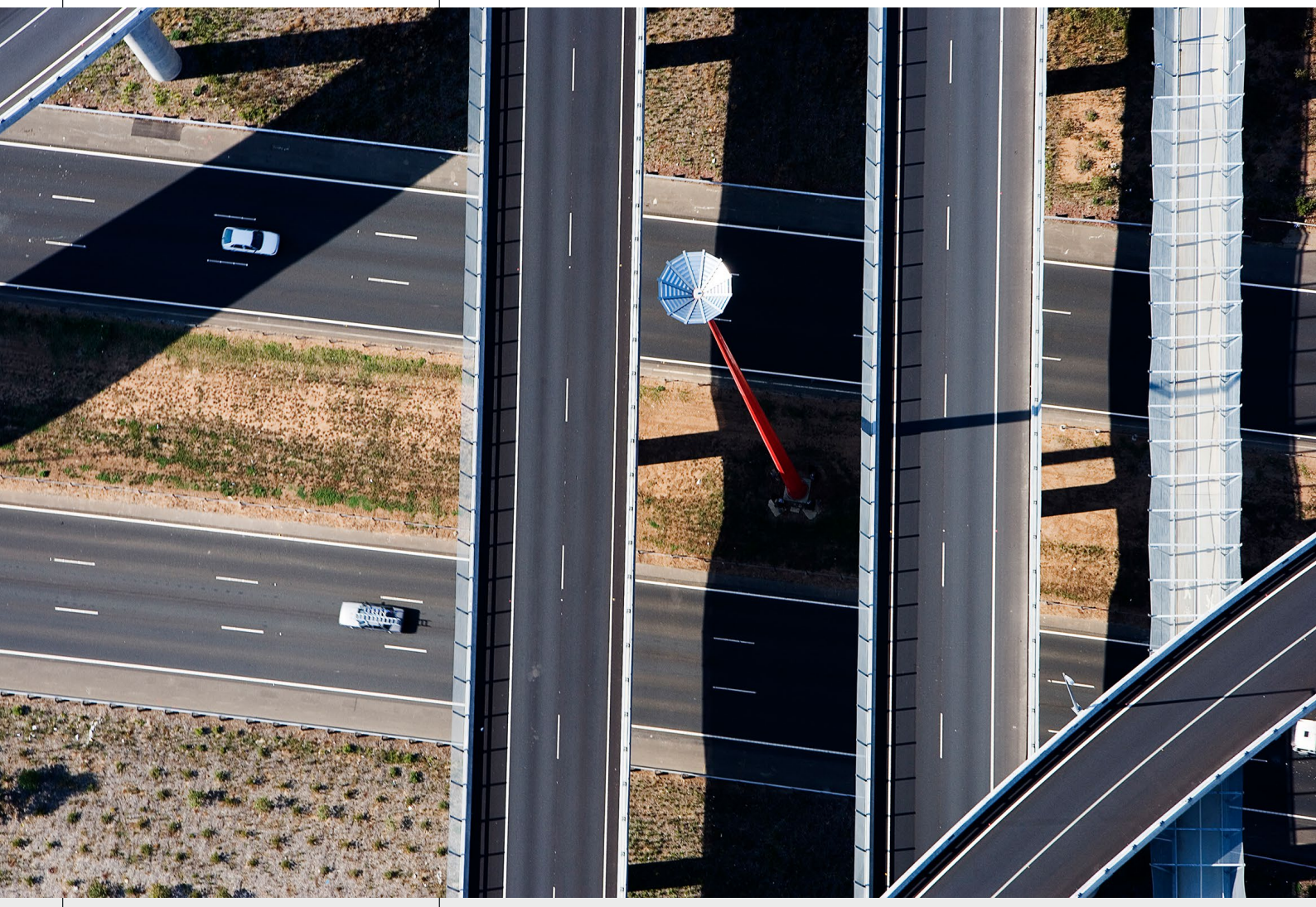
Transport for NSW

Westlink M7 Widening Submissions report

Darug Country

November 2022



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Acknowledgement of Country

Transport for NSW acknowledges the Darug people the traditional custodians of the land on which the Westlink M7 Widening is proposed. We pay our respects to their Elders past and present and celebrate the diversity of Aboriginal people and their ongoing cultures and connections to the lands and waters of NSW.

Many of the transport routes we use today – from rail lines, to roads, to water crossings – follow the traditional Songlines, trade routes and ceremonial paths in Country that our nation's First Peoples followed for tens of thousands of years.

Transport for NSW is committed to honouring Aboriginal peoples' cultural and spiritual connections to the land, waters and seas and their rich contribution to society

Document control

Approval and authorisation

Title	M7 Widening Submissions Report
Prepared by	AECOM
Accepted on behalf of Transport for NSW by:	Sheila Anderson, Senior Manager Environment and Sustainability Western Parklands, Integrated Precincts and Urban Renewal
Signed	
Date:	

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Glossary of terms and abbreviations

Term	Meaning
ACHMP	Aboriginal Cultural Heritage Management Plan
AHIMS	Aboriginal Heritage Information Management System
Ambient noise	The all-encompassing noise at a point composed of sound from all sources near and far.
ANZECC	Australian and New Zealand Environment Conservation Council
ANZG	Australian and New Zealand Guidelines for Fresh and Marine Water Quality (ANZG, 2018)
Approved project	The Westlink M7 (previously referred to as Western Sydney Orbital) is an existing 39-kilometre-long toll road connecting the M5 Motorway at Prestons, the Hills M2 Motorway at Baulkham Hills and the M4 Motorway at Eastern Creek.
ARR	Australian Rainfall and Runoff publication. The third edition was released in 1987 (Institute of Engineers Australia, 1987), and a fourth edition was issued in 2019 (Geoscience Australia, 2019).
ARTG	*At-Receiver Treatment Guideline* (Roads and Maritime Services, 2016b)
AS	Australian Standards
ASS	Acid sulfate soils
ASR	Archaeological Survey Report
Background noise	The underlying level of noise present in the ambient noise when extraneous noise (such as transient traffic and dogs barking) is removed. The L_{90} sound pressure level is used to quantify background noise.
BAM	Biodiversity Assessment Method
BC Act	*Biodiversity Conservation Act 2016* (NSW)
BDAR	Biodiversity Development Assessment Report
BMP	Biodiversity Management Plan
Capacity	The nominal maximum number of vehicles which has a reasonable expectation of passing over a given section of a lane or roadway in one direction during a given time period under prevailing roadway conditions.
Catchment	The land area draining through the mainstream, as well as tributary streams, to a particular site. It always relates to an area above a specific location.
CEMP	Construction Environmental Management Plan
Climate change	A change in the state of the climate that can be identified (e.g. using statistical tests) by changes in the mean and/or the variability of its properties, and that persists for an extended period, typically decades or longer (IPCC).
CO	Carbon Monoxide
Conditions of Approval (CoA)	These are the current conditions that apply to the approved project. Found at the following webpage: *https://majorprojects.planningportal.nsw.gov.au/prweb/PRRestService/mp/01/getContent?AttachRef=SSI-663-MOD-5%2120190718T013836.398%20GMT*
Construction ancillary facilities	Temporary facilities during construction that include, but are not limited to, construction work areas, sediment basins, material stockpile and laydown areas, parking, maintenance workshops and offices, and construction compounds.

Term	Meaning
Construction Environmental Management Plan	A site-specific plan developed for the construction phase to ensure that all contractors and sub-contractors comply with the environmental conditions of approval and that environmental risks are properly managed.
Construction footprint	The area required for construction of the Proposed Modification
Corridor	A substantial segment of the transport network, in which parallel, possibly competing, transport routes (and modes, where appropriate) operate between two locations.
CMP	Conservation Management Plan
CNVG	*Construction Noise and Vibration Guideline* (Roads and Maritime Services, 2016b)
CNVS	*Construction Noise and Vibration Strategy* (Transport for NSW, 2019)
CNVMP	Construction Noise and Vibration Management Plan
CSS	Catchment Simulation Solution 2014
CTAMP	Construction Traffic and Access Management Plan
Day (construction noise)	The period from 0700 to 1800 h Monday to Saturday and 0800 to 1800 h Sundays and Public Holidays. Road traffic noise: The period from 0700 to 2200 h every day of the week.
DECC	(Former) Commonwealth Department of Environment and Climate Change
Decibel [dB]	The A weighting is a frequency filter applied to measured noise levels to represent how humans hear sounds. The A-weighting filter emphasises frequencies in the speech range (between 1 kHz and 4 kHz) which the human ear is most sensitive to and places less emphasis on low frequencies at which the human ear is not so sensitive. When an overall sound level is A-weighted it is expressed in units of dB(A).
Detailed design	The stage of design where project elements are designed in detail, suitable for construction.
Discharge	The rate of flow of water measured in terms of volume per unit time, for example, cubic metres per second (m3/s). Discharge is different from the speed or velocity of flow, which is a measure of how fast the water is moving (e.g. metres per second [m/s]).
DMP	Dewatering Management Plan
DPE	NSW Department of Planning and Environment
DPIE	(Former) NSW Department of Planning, Industry and Environment
Drainage	Natural or artificial means for the interception and removal of surface or subsurface water.
DRAINS	A computer simulation program which converts rainfall patterns to stormwater runoff and generates discharge hydrographs. These hydrographs can then be routed through networks of piped drainage systems, culverts, storages and open channels using the DRAINS software to calculate hydraulic grade lines and analyse the magnitude of overflows. Alternatively, discharge hydrographs generated by DRAINS can be used as inflows to alternative hydraulic models (such as the TUFLOW two-dimensional hydraulic modelling software) to calculate water surface levels and flooding patterns.
DSI	Detailed Site Investigation
Earthworks	All operations involving the loosening, excavating, placing, shaping and compacting of soil or rock.
EHG	Environment and Heritage Group
EIS	Environmental impact statement
Embankment	An earthen structure where the road (or other infrastructure) is located above the natural surface.

Term	Meaning
Entry ramp	A ramp by which one enters a limited-access highway/tunnel.
EPA	NSW Environment Protection Authority
EP&A Act	*Environmental Planning and Assessment Act 1979* (NSW). Provides the legislative framework for land use planning and development assessment in NSW
EPL	Environment protection licence
ESCP	Erosion and sediment control plan
ESD	Ecologically Sustainable Development
Evening	Construction noise: The period from 1800 to 2200 h Monday to Sunday and Public Holidays. Road traffic noise: Not applicable.
Exit ramp	A ramp by which one exits a limited-access highway/tunnel.
Fill	The material placed in an embankment.
Flash flooding	Flooding which is sudden and unexpected. It is often caused by sudden local or nearby heavy rainfall. Often defined as flooding which peaks within six hours of the causative rain.
Flood	Relatively high stream flow which overtops the natural or artificial banks in any part of a stream, river, estuary, lake or dam, and/or local overland flooding associated with major drainage before entering a watercourse, and/or coastal inundation resulting from super-elevated sea levels and/or waves overtopping coastline defences excluding tsunamis.
GHG	Greenhouse gas
Greenhouse gas (GHG)	Any various gaseous compounds (such as carbon dioxide or methane) that absorb infrared radiation, trap heat in the atmosphere, and contribute to the greenhouse effect.
Heavy vehicles	A heavy vehicle is classified as a Class 3 vehicle (a two-axle truck) or larger, in accordance with the Austroads Vehicle Classification System. Also called heavy goods vehicles (HGVs).
HGV	Heavy Goods Vehicles
ICNG	*Interim Construction Noise Guideline* (DECC, 2009)
Impact	Influence or effect exerted by a project or other activity on the natural, built and community environment.
Inundation	The spreading of a flood over an area.
IS	Infrastructure Sustainability
ITS	Intelligent Transport Systems. Systems in which information and communication technologies are applied in the field of road transport, including infrastructure, vehicles and users, and in traffic management and mobility management, as well as for interfaces with other modes of transport.
LAeq	Equivalent Continuous Sound Pressure Level, the constant noise level that would result in the same total sound energy being produced over a given period.
LALC	Local Aboriginal Land Council
Lane	A portion of the carriageway allotted for the use of a single line of vehicles.
LCC	Liverpool City Council
LEP	Local Environmental Plan
LGA	Local Government Area
LoS	Level of Service

Term	Meaning
M	Metres
Median	The strip of land between the carriageways of a motorway or other major road.
Mitigation	Actions or measures to avoid or reduce the impacts of a project.
Modification	Proposed changes to be made to the approved project.
Modification application	This report forms part of an application seeking to modify an SSI development consent under section 5.25 of the EP&A Act.
NCA	Noise catchment area
Night (construction noise)	The period from 2200 to 0700 h Monday to Saturday and 2200 to 0800 h Sundays and Public Holidays. Road traffic noise: The period from 2200 to 0700 h every day of the week.
NMG	*Noise Mitigation Guideline* (Roads and Maritime Services, 2015b)
NO_2	Nitrogen Dioxide
Noise management level [NML]	The level which represents the point above which there may be some community reaction to noise.
NSW	New South Wales
NVIA	Noise and Vibration Impact Assessment
OEH	NSW Office of Environment and Heritage
OOHW	Out of Hours Works
Operational footprint	The area required for operation of the proposed modification.
PCT	Plant community type
Physical risks	Risks driven by physical changes in climate such as heatwaves, flooding, and sea level rise. These can be event driven (acute) or longer-term shifts (chronic) in climate patterns.
$PM_{2.5}$	Particulate matter of up to 2.5 micrometres
Proposed modification	The addition of a trafficable lane in both directions within the existing median of the Westlink M7, from about 140 metres south of the Kurrajong Road bridge at Prestons (southern end) to the Westlink M7 Bridge at Richmond Road in Oakhurst/Glendenning (northern end), excluding at the M4 Motorway/Westlink M7 Light Horse Interchange.
Rating background level [RBL]	The overall background level for each day, evening and night period for the entire length of noise monitoring.
RBL	Rating background levels
Receptor	Location where a modelling prediction is made. This may represent an actual location on the ground (such as residential premises or industrial development) or may represent an arbitrary point in space used to generate concentration contours.
Risk	The likelihood of an adverse event occurring.
RNP	*NSW Road Noise Policy* (DECCW, 2011)
RSL	NSW Returned and Services League
Runoff	The amount of rainfall which actually ends up as stream flow, also known as rainfall excess.
Scour	The erosion of material by the action of flowing water.

Term	Meaning
SEARs	Secretary's Environmental Assessment Requirements
Secretary's Environmental Assessment Requirements	Requirements and specifications for an environmental assessment prepared by the Secretary of the Department of Planning, Industry and Environment under the *Environmental Planning and Assessment Act 1979* (NSW).
SEPP	State Environmental Planning Policy
SES	NSW State Emergency Services
SIA	Social impact assessment
SOHI	Statement of Heritage Impact
SSD	State Significant Development
SSI	State Significant Infrastructure
Stockpile	Temporarily stored materials such as soil, sand, gravel and spoil/waste.
Study area	The study area for this assessment, as defined in Section 1.2.
Surface water	Water flowing or held in streams, rivers and other water bodies in the landscape.
SWFIA	Surface Water and Flooding Impact Assessment
SWMP	Soil and Water Management Plan
TEC	Threatened ecological community
Transport for NSW (Transport)	The proponent seeking approval for the modification.
Traffic noise	The total noise resulting from road traffic. The L_{eq} sound pressure level is used to quantify traffic noise.
TSS	Total suspended solids
TUSTM	Transurban's Strategic Transport Model
UIA	Urban Investigation Area
VMP	Vegetation Management Plan
VMS	Variable message sign
VOC	Volatile organic compound
VSLS	Variable speed limit sign
Westlink M7	M7 Motorway or formerly known as Western Sydney Orbital
WHSMP	Work Health Safety Management Plan
WSA	Western Sydney Airport
WSO Co.	Westlink M7 Concessionaire
WSP Act	*Western Sydney Parklands Act 2006* (NSW)
WM Act	*Water Management Act 2000* (NSW)
WQO	Water quality objectives

Summary

Transport for NSW (Transport) proposes to widen part of the Westlink M7 in response to current and projected future traffic growth, and to address reduced motorway efficiency and enhance safety (the proposed modification). The proposed modification would enable the construction and operation of an additional lane in both directions within the existing median of the Westlink M7, for approximately 26 kilometres from about 140 metres south of the Kurrajong Road bridge at Prestons (southern end) to the intersection with Richmond Road in Oakhurst/Glendenning (northern end), excluding at the M4 Motorway/Westlink M7 (Light Horse) Interchange.

The proposed modification is located on traditional country of the Darug people and is situated within the following local government areas (LGAs):

- Liverpool LGA
- Fairfield LGA
- Blacktown LGA.

The proposed modification is subject to assessment under Part 5, Division 5.2 of the *Environmental Planning and Assessment Act 1979* and approval by the Minister for Planning.

Transport prepared a Modification Report to assess the potential impacts of the proposed modification. The Department of Planning and Environment (DPE) placed the Modification Report on public exhibition from 3 to 23 August 2022.

What are the key details from the submissions?

During the exhibition period, a total of 33 submissions were received from 32 submitters for the Modification Report. Of the 33 submissions, 29 were from individual community members and local councils (including one submitter that made two submissions), and three were from special interest groups (representing cyclist user groups). In addition to the 33 submissions, a submission was also received from Western Sydney Airport after the exhibition period. This submission is also addressed in this report.

A geographic breakdown of the community and special interest group submissions revealed that 50 percent of submissions are from the local area (i.e. less than five kilometres from the proposed modification) and 27 percent of submissions are from the surrounding region (i.e. five to 100 kilometres from the proposed modification) and 23 percent did not provide an address or suburb.

Of the community and special interest group submissions received, 22 percent expressed support for the proposed modification, 19 percent objected to the proposed modification and 59 percent did not offer a position and only provided comment on the proposed modification.

Advice was also received from the following government agencies during the exhibition period:

- Heritage NSW
- Water NSW
- Department of Planning and Environment – Water
- Department of Planning and Environment – Environment and Heritage Group (EHG)
- NSW Environment Protection Authority (EPA).

In addition, advice was also received from NSW Health (Western Sydney Health District) after the exhibition period. This advice is also addressed in this report.

What are the main issues and responses?

A summary of the main advice raised by government agencies and Transport's response is provided below:

- Works within waterfront land must be in accordance with the *Guidelines for Controlled Activities on Waterfront Land*
  - Appropriate mitigation and management measures have been recommended in the Modification Report, including mitigation measure SW7 to manage construction activities within watercourses, which references the *Guidelines for Controlled Activities on Waterfront Land.*
- Additional microbat survey should be undertaken in accordance with EHG survey guidelines, in springtime and results included in the Response to Submissions
  - Additional microbat (Southern Myotis) survey is proposed to be undertaken in November 2022, in accordance with relevant guidelines, to inform the Microbat Management Plan.
- Opportunities to further avoid impacts to threatened flora should be considered.

- Opportunities to further avoid or reduce impacts to vegetation will be considered during detailed design. EHG recommends areas be subject to a vegetation management Plan (VMP) that is developed and implemented by a suitably qualified ecologist in consultation with a bushland regenerator.
  - A Biodiversity Management Plan (BMP) will be developed for the proposed modification, as described in mitigation measure B1 of the Modification Report. The BMP will include rehabilitation methods and management of vegetation, weeds and fauna habitat, as well as erosion and sediment stabilisation, rubbish removal and habitat supplementation. This plan will be developed by a suitably qualified ecologist and Transport will consider consulting with a bushland regenerator during the development of the BMP.
- Comments regarding the verification of the Surface Water and Flooding Impact Assessment base case models and data used
  - The updated flood assessments that would be carried out to support the detailed design of the proposed modification will have regard to updated flood study information, where this information is available at the time of carrying out the detailed design. Otherwise, the methodology of the Surface Water and Flooding Impact Assessment is considered adequate.
- Concerns regarding the impact of vibration from the construction and operation of the proposed modification on the heritage listed 'Shaft No. 4 of the Upper Canal System' (SHR 01273)
  - An addendum to the non-Aboriginal heritage assessment report has been prepared as part of this Submissions Report (refer to Appendix E and Section 4.2), which further assesses indirect vibrational impacts on components of the Shaft No. 4 and recommends one additional mitigation measure.
- Concerns regarding potential noise impacts associated with construction traffic
  - Mitigation measures NV1, NV7 and T1 in the Modification Report will manage and mitigate impacts from construction related traffic. NV1 requires a Construction Noise and Vibration Management Plan (CNVMP) be prepared where all feasible and reasonable mitigation measures are detailed. NV7 provides specific mitigation measures related to construction traffic and T1 requires a Construction Traffic and Access Management Plan (CTAMP) be prepared as part of the Construction Environmental Management Plan (CEMP).
- Concerns that the stormwater assessment in the Surface Water and Flooding Impact Assessment is not based on appropriate guidelines and objectives
  - Mitigation and management measures SW1, SW9, and C1 have been revised and updated considering advice of the NSW Environment Protection Authority and new mitigation measure SW13 added. It is considered that the stormwater assessment methodology was performed adequately and was in line with appropriate guidelines and measures
- Request that a review is performed of the proposed modification to consider and include opportunities for improved active transport linkages across the Westlink M7
  - Transport will investigate ways to improve the improve the flood immunity of the shared path near Ash Road Prestons as part of the proposed modification, which has been included in the newly added mitigation measure SW12. Furthermore, as noted by mitigation measure T4 (refer to Chapter 7.1 of the Modification Report), a construction phase active transport strategy will be developed to document planned shared path detours and any required upgrades to these facilities during construction to safely accommodate shared path users. The proposed modification would not preclude the development of additional active travel infrastructure or further active travel connections in future. Additionally, as part of Transport's *Future Transport Strategy* (Transport for NSW, 2022a), Transport will develop an Active Transport Strategy, Strategic Cycleway Corridors and regional networks, and invest in walking and cycling infrastructure across the Western Parkland City. Transport will continue to work with councils under the 'Get NSW Active' grants program to develop sections of Cycleway Corridors to progressively expand the connected network.
- Concerns regarding the biodiversity assessment, specifically regarding impacts to the Southern Myotis
  - The Modification Report includes mitigation measure B3, which commits to field surveys to confirm whether Southern Myotis is present and to refine the offset obligation for this species, as required. Additional field surveys are proposed to be undertaken in November 2022 (after publication of this report). The additional field surveys will be used to inform the Microbat Management Plan identified in the Modification Report

A summary of the main issues raised by the community, local councils, special interest groups, and businesses, and Transport's responses, are provided below:

- Concerns about the proposed modification description or design, including comments regarding the impacts to the broader transport network, primarily a number of downstream intersections, due to the proposed widening.

Additionally, submitters requested that the surrounding road and transport network adjacent to the Westlink M7 be upgraded, such as upgrades to the M4 and M5 Motorways and construction of the Castlereagh Freeway

  - The proposed modification was developed in line with the identified need for the modification (refer Chapter 3.1 of the Modification Report) and the stated objectives of the proposed modification. Overall, the proposed modification would improve vehicle speeds for the sections of the Westlink M7 that would be widened and have an additional lane added. However, vehicle speeds for the northern and southern extents outside the proposed widening would experience increased traffic demands, as more vehicles would be attracted to the Westlink M7 with the proposed modification. Although the proposed modification would bring forward the need to consider solutions for these areas to cater for forecast increases in traffic volumes, these increases are mainly associated with population and employment growth rather than the implementation of proposed modification. The proposed modification does not preclude any future upgrades to the surrounding road and transport network adjacent to the Westlink M7. Existing and future constraints in the broader road and transport network beyond the proposed modification extents would be investigated and addressed by Transport in the network optimisation plan.

- Issues with the options and alternatives considered in the development of the proposed modification, including the number of lanes proposed, the omission of public transport infrastructure, the location and design of intersections and entry/exit ramps, and general traffic congestion concerns.
  - The scope of the proposed modification is driven by the proposal's need, which is to provide additional capacity on the Westlink M7 to meet future predicted traffic growth, reduce congestion and improve connectivity and reliability. Detailed traffic investigation and modelling was carried out to understand the future demands of population growth and traffic growth along the Westlink M7. The traffic assessment indicated that in future years (2026 and 2036) traffic volumes would not reach levels where further additional lanes other that what is currently proposed would be necessary, and that the proposed modification would meet predicted traffic and population demands along the corridor. For example, analysis of anticipated traffic demands for the northbound exit from the Westlink M7 concluded that traffic demands would exceed the capacity of a single lane into the future and hence a two-lane northbound exit to the M4 Motorway has been included in the design to facilitate the expected growth. This analysis did not identify the need for dual lanes exiting the M4 southbound onto the Westlink M7.

    Increasing the road capacity of this key north-south motorway, in conjunction with the development of the network of public transport infrastructure projects in Greater Sydney and Western Sydney in particular, would support the objectives of the strategic metropolitan and transport documents shaping Greater Sydney's growth. Since the construction of the Westlink M7, these current strategies have prompted the development of significant programs of public transport infrastructure and corridors in the region, such as Sydney Metro (Western Sydney International Airport and West) and the Liverpool-Parramatta and North-West T-way bus services. As such, it was concluded that the space within the median strip would be used for additional traffic lanes, rather than for the dedicated provision of public transport. The design of the proposed modification would not preclude use of the motorway for public transport facilities (e.g. on the new traffic lanes) in the future should there be a change to strategic transport policies. Further information can be found in Section 3 (Need for the modification and strategic context) of the Modification Report.

- Noise impacts, particularly in relation to road traffic noise during operation
  - A noise and vibration assessment were undertaken for the proposed modification, which is provided in Appendix E and summarised in Section 7.2 of the Modification Report. The assessment found that cumulative noise impacts associated with the operation of the widened section of the Westlink M7 are predicted to exceed applicable noise criteria at some locations and would generally occur at receivers directly adjacent to the Westlink M7 corridor. Appropriate noise mitigation measures NV17 and NV18 have been provided to minimise adverse impacts on the community from the proposed modification, in accordance with the *Noise Mitigation Guideline* (RMS, 2015b) and the *Draft At-Receiver Noise Treatment Guideline* (RMS, 2017).

    The mitigation measures proposed in the Modification Report are considered to be sufficient to avoid, mitigate and/or minimise any significant noise and vibration impacts to the local community.

- Concerns about the temporary closure of sections of the Westlink M7 shared path during the construction period of the proposed modification and distance of proposed detours
  - The timing, extent and duration of closures of the shared path and associated detours during construction will be minimised wherever possible and confirmed once the construction contractor has been appointed and would be influenced by the final construction methodology as well as feedback from stakeholders and local councils.

    Potential impacts to pedestrian and cyclist access associated with the shared path during construction will be managed by mitigation measures prepared by the construction contractor in consultation with

stakeholders, councils and Transport. This includes development of an active transport strategy to document planned shared path detours and upgrades to the surrounding shared path/footpath network to safely accommodate shared path users (refer to mitigation measure T4, Chapter 7.1.6 of the Modification Report).

Transport will communicate all closures as early as possible so that community members and stakeholders are aware of closure details. Suitable detours that aim to support and encourage active transport will also be identified and communicated early. Should the proposed modification be approved, further consultation would take place with the community and key stakeholders (including bicycle user groups) during construction planning and prior to the commencement of/and during construction.

- Issues regarding the consultation methodology used, including claims that the methodology was perfunctory, flawed, generalised and misleading and requests for further consultation
  - Details of the consultation process are located in Section 6 (Consultation) of the Modification Report, which outlines the specific stakeholders/sections of the community that were consulted. Consultation undertaken with key stakeholders during design development and preparation of the Modification Report has occurred since December 2020. Community and business surveys were also undertaken as part of the Social Impact Assessment (refer Appendix M of the Modification Report). The SIA was prepared in accordance with The Social Impact Assessment Guideline for State Significant Projects (DPIE, 2021b). Furthermore, following discussion with NSW Heritage and the issuing of SEARs, Transport undertook to further investigate cultural values by engaging with Aboriginal people and groups beyond the LALCs. Transport invited Aboriginal people and Aboriginal groups who hold cultural knowledge and could share cultural values and insights for the Westlink M7 Widening project to register to be consulted using several different forums including print and online advertisements, attendance at the Blacktown yarning circle and inviting the Deerubbin and Gandangara Local Aboriginal Land Councils (LALCs). Transport arranged a site visit and subsequent feedback sessions to identify opportunities to engage with and recognise the Aboriginal community though design.

    Consultation with councils, the community and stakeholders would continue as the proposed modification progresses (subject to planning approval). Consultation is also summarised in Section 2.0 of this report.

    Transport will inform the community and stakeholders when a decision has been made regarding approval of the proposed modification by DPE. Should the proposed modification be approved, further consultation would take place with the community and key stakeholders during construction planning and prior to commencement of construction,

    The project Infoline, website and email address would be retained for enquiries and updates during construction, which will be available for all stakeholders.

- Issues regarding tolls, including concerns that tolls would increase to fund the proposed modification.
  - On the Westlink M7, motorists pay based on the distance travelled with trips capped once 20 kilometres have been travelled. These rates escalate or de-escalate with the consumer price index (CPI) each quarter. There is no planned increase in tolls above CPI escalation to fund the project.

- Concerns about the permanent prohibition of cyclists on the mainline of the Westlink M7.
  - The decision to prohibit cycling on the Westlink M7 mainline between the M5 Motorway and Richmond Road was made to address potential safety risks to cyclists associated with travelling with high-speed vehicular traffic on the motorway and inadequate lighting in the area at night, which has resulted in past fatal and critical cycling incidents on the Westlink M7. The proposed modification would also create a dual lane exit to the M4 Motorway on the northbound carriageway, preventing cyclists crossing at this location, as it is considered an unacceptable cyclist safety risk. Instead, cyclists would be able to travel on the shared path that runs parallel to the Westlink M7. The shared path is connected with the local road network (currently 66 connections), is separated from road traffic and allows users to enjoy an uninterrupted trip for nearly 40 kilometres, and is illuminated 24/7, providing a safe alternative route for cyclists.
  - The proposed modification would not preclude the development of additional active travel infrastructure or further active travel connections in future. Additionally, as part of Transport's Future Transport Strategy (Transport 2022a), Transport will develop an Active Transport Strategy to provide clear guidance to communities, local councils, and industry on planning and investment for walking and cycling infrastructure in NSW. The Strategy will illustrate the economic and social benefits of walking and cycling and provide direction and initiatives to enable more people to walk and ride more regularly between centres, precincts and places. This includes around, to and from recreational activity hubs, such as major parklands, as well as in and across neighbourhoods.

What are the outcomes from additional impact assessment?

In response to Heritage NSW advice about indirect impacts to elements of the heritage listed 'Shaft No. 4 of the Upper Canal System' (SHR 01273), an addendum to the Statement of Heritage Impact (SOHI) report has been prepared for the proposed modification. The addendum found that the results of the addendum SOHI were consistent with that of the Non-Aboriginal Heritage Impact Assessment (Appendix J of the Modification Report) in that the proposed modification would not have any direct impacts on the Shaft No. 4 and if the minimum working distances are followed, the works would not cause any indirect impact to the Upper Canal System, including the Shaft No. 4. An additional mitigation measure (H5) has been added to ensure that any proposed changes to the design or construction methodology in the vicinity of Shaft No.4 are reviewed by a suitably qualified heritage specialist to assess any changes to potential indirect vibration impacts.

An additional field survey will be undertaken to confirm whether Southern Myotis (microbat species) is present, to inform the Microbat Management Plan and to refine the offset obligation for this species. This would satisfy the request of the EHG and mitigation measure B3 from the Modification Report. The additional field survey is proposed to be undertaken in November 2022, which is within the survey period of October to March for this species, and therefore results are not available to be included in this report.

What refinements are proposed?

Transport will investigate ways to improve the flood immunity of the shared path near Ash Road Prestons as part of the proposed modification; this will be investigated through detailed design in consultation with Liverpool City Council.

Updated project justification

The Westlink M7 is an existing major road infrastructure corridor on Greater Sydney's orbital motorway network and has a key role in providing connections to communities and the related existing and future transport infrastructure. The Westlink M7 is also one of Greater Sydney's key freight corridors. Upgrading infrastructure, including roads, is vital to ensure that Greater Sydney's transport system is able to cope with the growth of its population and the need to travel between different areas of Greater Sydney. Plans such as *Greater Sydney Region Plan: A Metropolis of Three Cities – connecting people* (Greater Sydney Commission, 2018a), *Future Transport Strategy* (Transport, 2022a) and the *State Infrastructure Strategy 2018-2038 – Building Momentum* (Infrastructure NSW, 2018) identify that upgrading transport infrastructure assists in facilitating the objectives and outcomes of those plans.

Increasing the road capacity of this key north-south motorway, in collaboration with key stakeholders mentioned in this Submissions Report and the Modification Report, would support the objectives of the strategic metropolitan and transport documents shaping Sydney's growth.

The proposed modification remains consistent with the objectives of the stated in the Modification Report, and is consistent with, or does not preclude a number of strategic plans for transport (such as *Future Transport Strategy* (Transport, 2022a) at a regional level. For example, although the proposed modification does not directly enhance Active Transport in the region, the proposed modification does not preclude the active transport elements of *Future Transport* (Transport, 2022a), which commits Transport to develop an Active Transport Strategy, Strategic Cycleway Corridors and regional networks, and invest in walking and cycling infrastructure across the Western Parkland City. Transport will continue to work with councils under the Get NSW Active grants program to develop sections of Cycleway Corridors to progressively expand the connected network. The proposed modification is necessary to provide additional capacity on the Westlink M7 to meet future traffic growth, reduce congestion and improve connectivity and reliability in the region. Without the proposed modification, the network would progressively become more congested in modelled years 2026 and 2036 primarily due to urban population and traffic growth. The network performance of the Westlink M7 within the study area would substantially improve with the proposed modification in both 2026 and 2036.

The responses to submissions have resulted in an addendum SOHI, microbat survey and additional/updated mitigation measures, which would further minimise impacts to the environment and community. Furthermore, they have resulted in commitments to investigate ways to address the flood prone area of the shared path near Ash Road Prestons, which, if rectified, would enhance active travel linkages. The ongoing development, detailed design and delivery of the proposed modification would continue to manage and mitigate impacts so that they are able to be controlled to acceptable levels.

Several mitigation measures outlined in Section 4.3.2 have been revised and/or added as a result of the agency advice received. A full list of the revised environmental management measures proposed for the proposed modification is provided in Appendix B.

The responses to submissions do not alter the proposed changes to the Conditions of Approval as described in Chapter 8 of the Modification Report. Transport will comply with the Conditions of Approval issued by DPE should the proposed modification be approved, and the mitigation measures stated in the Modification Report and this Submissions Report will form part of the Conditions of Approval.

The responses to submissions/advice received and the subsequent additional assessment and additional mitigation measures proposed do not change the need, objectives or benefits of the proposed modification, and would assist in minimising impacts.

The statutory requirements of the proposed modification (as described in Chapter 5 of the Modification Report) have not changed as a result of the responses to submissions.

Transport and DPE will inform the community and stakeholders when a decision has been made on the approval of the modification application. Should the proposed modification be approved, continued consultation would take place with the community and key stakeholders during the planning of and prior to the commencement of any construction activities and throughout construction. Subject to approval and prior to construction commencing for the proposed modification, Transport would notify and consult with key stakeholders on the proposed construction timeframes, construction activities and detailed design.

What are the next steps?

This Submissions Report is available on the DPE's Major Project website via the following link: https://www.planningportal.nsw.gov.au/major-projects (search for M7 Motorway Widening (Mod 6)). DPE will consider this Submissions Report during its assessment of the proposed modification.

DPE will prepare an assessment report for consideration by the Minister for Planning, who will then decide whether or not to approve the proposed modification subject to Conditions of Approval. If approved, Transport would continue to engage with the community, government agencies and other stakeholders during the detailed design and construction phases of the proposed modification.

1. Introduction and background

1.1 Proponent

Transport for NSW
231 Elizabeth Street, Sydney NSW 2000
ABN: 18 804 239 602

1.2 Introduction

Transport for NSW (Transport) proposes to widen part of the Westlink M7 in response to current and projected future traffic growth, and to address reduced motorway efficiency and enhance safety (the proposed modification). The proposed modification would enable the construction and operation of an additional lane in both directions within the existing median of the Westlink M7.

The proposed modification is located on the traditional country of the Darug (or Dharug) people and is situated in the following local government areas (LGAs) and suburbs:

- Liverpool LGA
  - The suburbs of Cecil Hills, Elizabeth Hills, Green Valley, Middleton Grange, Hoxton Park, Miller, Prestons, Lurnea and Casula
- Fairfield LGA
  - The suburbs of Horsley Park, Cecil Park and Abbotsbury
- Blacktown LGA.
  - The suburbs of Oakhurst, Dean Park, Glendenning, Plumpton, Rooty Hill, Doonside, Bungarribee, Minchinbury, Arndell Park, Huntingwood and Eastern Creek.

The proposed modification is subject to assessment under Part 5, Division 5.2 of the *Environmental Planning and Assessment Act 1979* (EP&A Act) and approval by the Minister for Planning.

A Modification Report was prepared (*Westlink M7 Widening Modification Report, Modification 6* (Transport, 2022b) to assess the potential impacts of the proposed modification, and to identify the management measures to address those impacts. The Modification Report was exhibited by the Department of Planning and Environment (DPE) from 3 August to 23 August 2022.

On 25 August 2022, the Planning Secretary requested Transport submit a response to the issues raised in agency advice and submissions made during the public exhibition of the Modification Report, in accordance with section 5.17(6)(a) of the EP&A Act.

This Submissions Report identifies and responds to the issues raised during the public exhibition of the Modification Report and identifies updated environmental management measures and outcomes from additional impact assessments for the proposed modification.

1.3 Overview of the project

Transport proposes to widen part of the Westlink M7 in response to current and projected future traffic growth, and to address reduced motorway efficiency and enhance safety. The proposed modification would enable the construction and operation of an additional lane in both directions within the existing median of the Westlink M7.

The proposed modification would include the following key components:

- Widening of the motorway into the existing median for a length of about 26 kilometres along the Westlink M7, from about 140 metres south of the Kurrajong Road overhead bridge at Prestons (southern end) to the Westlink M7/Richmond Road interchange in Oakhurst/Glendenning (northern end), excluding at the Westlink M7/M4 Motorway (Light Horse) Interchange
- Widening the exit from the Westlink M7 northbound onto the M4 Motorway westbound from one lane to two lanes
- Widening of 43 existing northbound and southbound bridges on the Westlink M7 at 23 locations within the centre median, and on the outside of the bridges on the approach to the M4 Motorway from Old Wallgrove Road
- Upgrades, additions and modifications to noise walls

- Utility works and upgrades to drainage
- Intelligent Transport Systems (ITS) installations, adjustments and relocations to cover the new lane configurations, including toll gantry adjustments, relocation of variable speed limit signs (VSLS) and variable message signs (VMS) and new traffic loops to cover the new lanes
- Various construction activities and the use of temporary construction ancillary facilities along and near to the Westlink M7 would also be required.

The extent of the approved project and the proposed modification is shown in Figure 1-1.

The timing of the opening of the proposed modification is subject to planning approval and the completion of detailed design, however construction is expected to be completed by 2025.

A more detailed description of the proposed modification and how the potential impacts would be managed and mitigated is found in the Modification Report accessed via the following link:

https://pp.planningportal.nsw.gov.au/major-projects/projects/m7-motorway-mod-6-widening

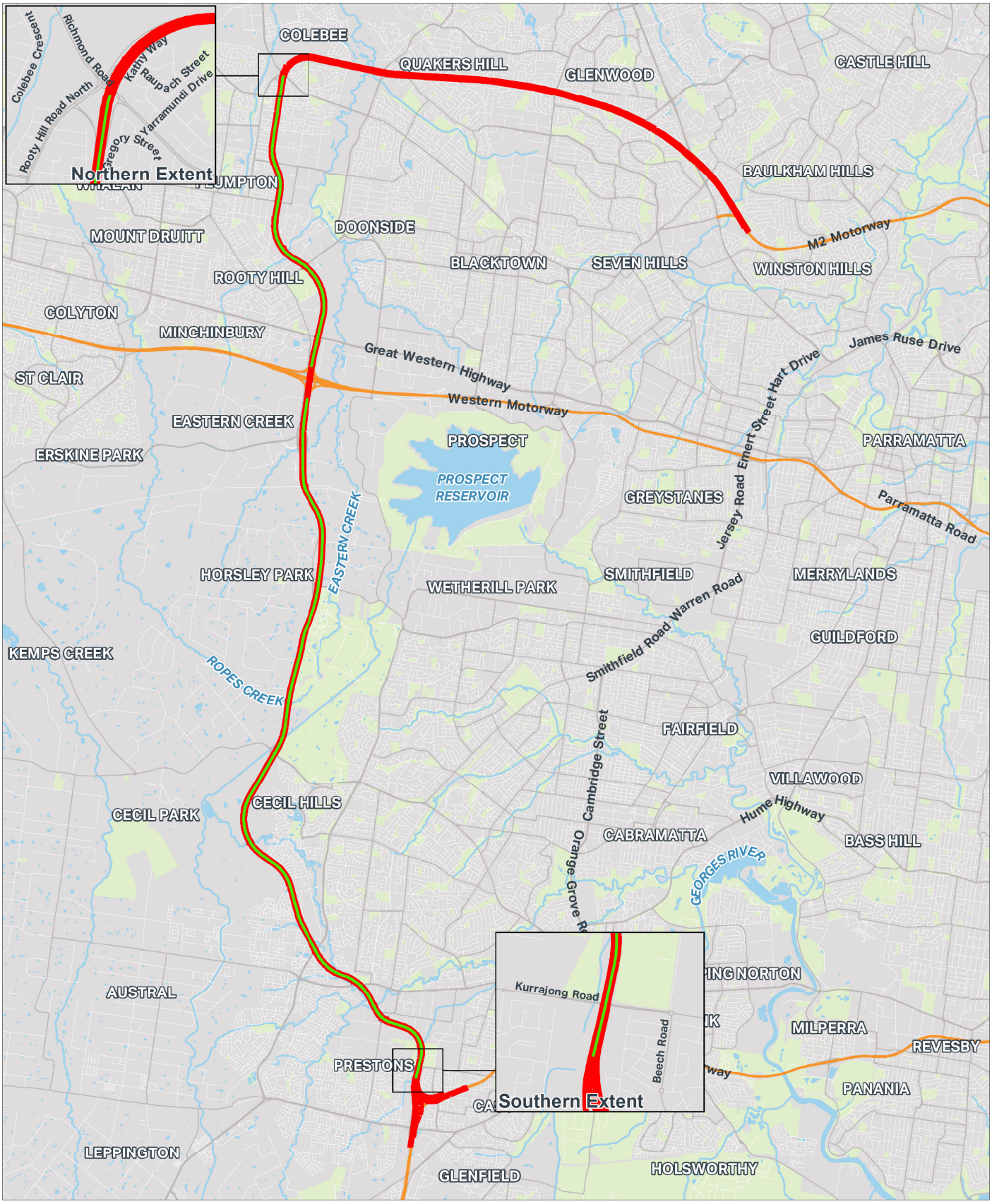

FIGURE 1-1: EXTENT OF THE APPROVED PROJECT AND THE PROPOSED MODIFICATION

N

0 2 4 km

AECOM

Legend

- Proposed modification
- Approved project
- Motorway
- Primary road

Source:

1.4 Purpose and structure of this Submissions Report

Transport has prepared this Submissions Report to address the Planning Secretary's request to submit a response to the issues raised in government agency advice and submissions to the Modification Report as received on 25 August 2022, as well as council submissions and agency advice received after 25 August 2022, in accordance with DPE's State Significant Infrastructure and State Significant Project Guidelines.

This Submissions Report identifies the issues raised during exhibition of the Modification Report and provides responses to those issues. It includes information regarding additional studies carried out since the exhibition of the Modification Report, identifies refinements to the proposed modification, updated environmental mitigation measures in response to the submissions and advice and provides an updated justification of the proposed modification.

The structure of the Submissions Report is outlined in Table 1-1.

Table 1-1 Structure of this report

Chapter	Description
Chapter 1	**Introduction and background (this chapter)** Includes a summary of the proposed modification and the assessment undertaken to date.
Chapter 2	**Stakeholder and community engagement** Outlines the stakeholder and community engagement process for the exhibition of the Modification Report and during preparation of this Submissions Report.
Chapter 3	**Analysis of submissions** Analyses the submissions received during public exhibition of the Modification Report.
Chapter 4	**Actions taken since exhibition** Summarises the actions taken by Transport since the public exhibition of the Modification Report.
Chapter 5	**Response to government agency advice** Provides a detailed summary of comments/issues raised in the government agency advice and Transport's response.
Chapter 6	**Response to community submissions** Provides a summary of issues raised in submissions from the community, local councils and special interest groups, and Transport's response to them.
Chapter 7	**Updated project justification and conclusion** Includes an updated justification of the proposed modification as a whole following the public consultation process and analysis of the issues raised in submissions.
Chapter 8	**References**
Appendix A	**Submissions register**
Appendix B	**Updated environmental mitigation measures**
Appendix C	**Government agency advice**
Appendix D	**Submissions from community, local council, special interest groups, and businesses**
Appendix E	**M7 Widening Aboriginal Engagement Report**
Appendix F	**Non-Aboriginal heritage addendum Statement of Heritage Impacts**

2. Stakeholder and community engagement

2.1 Exhibition activities

Chapter 6 (Consultation) of the Modification Report described the stakeholder and community engagement that was carried out prior to the exhibition of the Modification Report. The Modification Report was exhibited by DPE for 21 days from 3 August to 23 August 2022. Electronic copies of the Modification Report were available via:

- The project's web portal at: https://roads-waterways.transport.nsw.gov.au/projects/westlink-m7-upgrade/index.html
- DPE's website at: https://pp.planningportal.nsw.gov.au/major-projects/projects/m7-motorway-mod-6-widening

Stakeholder and community engagement carried during the exhibition period included:

- **Community update newsletter:** A newsletter was distributed to residents near the Westlink M7, which included information on the exhibition period, where the report may be read, how submissions can be made, and summaries on key chapters from the report
- **Website update:** The project website was updated with information on the Modification Report including a link to the online report
- **Social media:** Two geo-targeted ads were published on Transport's Facebook page to inform the public that the report was on exhibition. The ads were geotargeted to the Liverpool, Blacktown and Fairfield LGAs
- **Stakeholder email:** Stakeholders including government agencies, nearby businesses, Aboriginal groups and organisations and other community groups were emailed to inform them the report was on exhibition, including a link to read the report and information on how to make a submission
- **Stakeholder briefings:** Stakeholders were offered a briefing on the Modification Report during or shortly after public exhibition (refer Section 2.2).

During the exhibition period, government agencies, stakeholders and the community were able to review the Modification Report and had the opportunity to make a submission to DPE for consideration in its assessment of the proposal.

An overview of the submissions received during public exhibition is provided in Chapter 3 (Overview of submissions received) of this report.

2.2 Stakeholder briefings

Since the commencement of exhibition of the Modification Report, briefings on the Modification Report have been held with the following stakeholders:

- Liverpool City Council
- Fairfield City Council
- Blacktown City Council
- NSW EPA
- Heritage NSW.

2.2.1 Additional consultation with Aboriginal parties

In addition to the consultation undertaken as part of the Aboriginal heritage assessment for the proposed modification (refer Section 7.8 (Non-Aboriginal heritage) and Appendix I (Aboriginal heritage) of the Modification Report), Transport carried out an advertising campaign and engaged with the Aboriginal community to connect with local people who have stories and particular connections with lands within the footprint of the proposed modification. This campaign was carried out between 29 June and 13 July 2022, using several different forums including print and online advertisements, geo-targeted advertising on Facebook and attendance at the Blacktown yarning circle on 22 July 2022. Deerubbin Local Aboriginal Land Council (LALC) and Gandangara LALC were also contacted and invited to participate.

On 11 August 2022, Transport arranged a site visit by bus and a workshop for cultural knowledge holders to share their cultural values and insights for the proposed modification. Three participants attended the workshop and site visit, including representatives of RAW Cultural Healing, Arunga Aboriginal Cultural Heritage Site Assessments, and Didge Ngunawal Clan. Others registered, however, were unable to attend on the day. All of those who registered but could not attend were contacted afterwards to offer a briefing and an opportunity to comment.

Three key themes came out of the workshop, with discussion focusing on identifying opportunities to engage with and recognise the local Aboriginal community through design. The participants spoke of:

- The significance of native vegetation, specifically Black Wattle, the Silver Dollar Gum and Kurrajong trees
- Opportunities to identify key cultural values or features within the footprint of the proposed modification through interpretative signage and artwork
- Opportunities to recognise Aboriginal servicemen through a memorial at the Westlink M7/M4 Motorway (Light Horse) Interchange
- The following recommendations will be considered during construction and detailed design based on what Transport heard in the workshop (see new mitigation measure AH7):
  - Opportunities to incorporate indigenous plantings into the design
  - Design should consider and identify key cultural values or features through signage or artwork along the Westlink M7 corridor
  - Recognition of Aboriginal servicemen through a new memorial (either at the M12 interchange, similar to the Light Horse Interchange, as part of the M12 Motorway project), or otherwise as part of the existing Light Horse Interchange.

The M7 Widening Aboriginal Engagement Report can be found in Appendix E of this Submissions Report.

2.2.2 Aboriginal heritage survey

In addition to the surveys undertaken with representatives of the Deerubbin and Gandangara LALCs for the Aboriginal heritage assessment for the proposed modification, re-survey of an area was undertaken with representatives of the Gandangara LALC, at their request. This survey specifically concentrated on the Ash Road access corridor and proposed Maxwells Creek ancillary facility (compound C2@B9817). The Gandangara LALC confirmed that “Aboriginal Culture and spirituality is interdependent with landform, waterways, vegetation, and wildlife” and that natural values of that mature endangered Plant Community Types (PCTs) that are due to be removed as part of the proposed modification should not be ignored.

As per the original survey findings for the proposed modification, the additional survey of vegetation, in particular the PCTs in this area, re-confirmed that neither area contains landform elements of subsurface archaeological sensitivity, due to significant historical and natural land disturbance. Additionally, no Aboriginal objects were identified. Recommended mitigation measures to manage the potential biodiversity impacts of the proposed modification, including those within ancillary facility C2@B9817, would include the preparation of a Biodiversity Management Plan (BMP) (mitigation measure B1), as well as a range of other additional measures). Mitigation measure LV7 also requires re-vegetation of riparian corridors and areas under bridges with indigenous plant species, and, as noted in Section 2.2.1, the new mitigation measure (AH7, refer Appendix B) recommends opportunities to incorporate indigenous plantings into the design.

2.3 Engagement to be carried out

Transport and DPE will inform the community and stakeholders when a decision has been made on the modification application. Should the proposed modification be approved, continued consultation would take place with the community and key stakeholders during construction. This process is consistent with what was described in Chapter 6 (Consultation) of the Modification Report. Accessed via the following link:

https://majorprojects.planningportal.nsw.gov.au/prweb/PRRestService/mp/01/getContent?AttachRef=SSI-663-MOD-6%2120220801T052955.638%20GMT.

Subject to approval and prior to construction commencing for the proposed modification, Transport would notify and consult with relevant stakeholders in line with the Modification Report and mitigation measures council (refer to Appendix B (Updated environmental management and mitigation measures) of this Submissions Report).

The project Infoline, website and email address would be retained for enquiries and updates during construction. Comments and concerns received would be managed under an approved Complaints Management Procedure.

3. Analysis of submissions

3.1 Overview of submissions

The Planning Secretary received 33 submissions from 32 submitters during the public exhibition of the proposed modification and provided copies of the submissions to Transport. In addition to the 33 submissions, two additional submissions were received by the Planning Secretary after the public exhibition period of the proposed modification, including a submission from Western Sydney Airport, and a submission from NSW Health (Western Sydney Health District) (which was the last submission received, on 20 September 2022)

The submissions received during the exhibition period were from the following:

- Three from special interest groups (representing cyclist user groups)
- 29 from the community (including one submitter that made two submissions and three local councils).

Of the submissions received during the exhibition period, approximately 22 percent expressed support for the project, 19 percent objected to the proposed modification and 59 percent did not offer a position and only provided comment on the proposed modification.

Advice was also received from the following government agencies during the public exhibition of the proposed modification:

- Department of Planning and Environment - Water
- Department of Planning and Environment - Environment and Heritage Group (EHG)
- NSW Environment Protection Authority (EPA)
- Heritage NSW
- Water NSW.

Agency advice and community submissions have been examined individually to properly understand each of the issues raised.

The issues raised in each submission have been collated and corresponding responses to the issues have been provided. Refer to Chapter 5 and Chapter 6 of this Submissions Report for the responses to the submissions.

A submissions register is provided in Appendix A of this report. The register identifies the submitter's unique ID number, submission number, and where in this report the issue/s raised in their submissions are addressed.

3.2 Breakdown of submissions

3.2.1 Government agency advice

Chapter 5 documents the advice received from government agencies, which has been replicated and responded to directly. Full copies of government advice are provided in Appendix C. A summary of the main issues raised include:

- Noise impacts from construction (including road noise impacts from detoured traffic) and operation of the proposed modification on local communities
- Biodiversity impacts, including to the Southern Myotis, and clearance of native vegetation
- Shared path impacts during construction and proposed plans during operation of the proposed modification
- Water quality and hydrology impacts during construction, including in regard to discharge quality and velocity, and control measures for potentially contaminated erosion and sedimentation
- Water quality and flooding impacts during operation, including in regard to meeting water quality objectives and flood model methodology
- Impact of vibration from the construction and operation of the proposed modification on heritage listed items
- The impact of urban heat and the potential to add more built shade or trees within the design, particularly trees in breakdown bays and along the shared user path
- Additional connections along the shared user path.

3.2.2 Community, special interest groups and businesses

Chapter 6 documents the submissions received from community, local councils, special interest groups and businesses. The issues raised in each submission have been collated into categories, and corresponding responses to each issue category have been provided.

Of the key issues raised, almost half of submissions identified concerns regarding the design of the proposed modification, and approximately one quarter of submissions raised concerns regarding the options and alternatives considered in the development of the proposed modification (Figure 3-1).

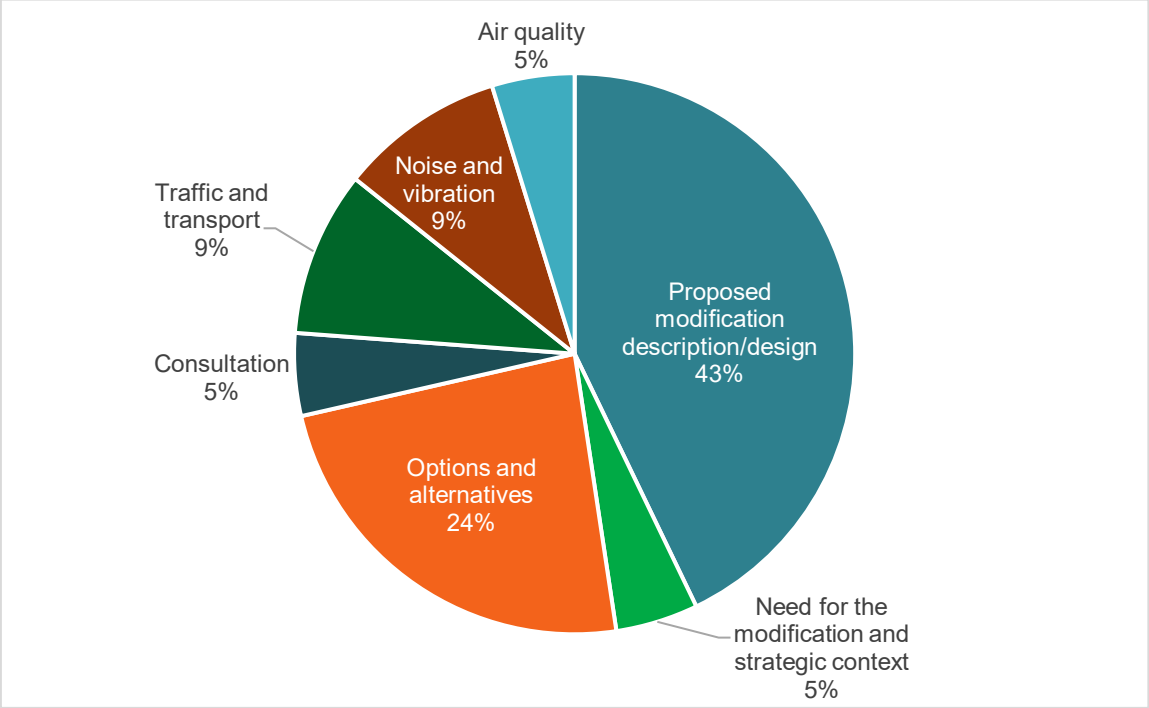

Figure 3-1: Issues raised by community, special interest groups, and businesses.

A summary of the key issues raised in submissions from the community and special interest groups include:

- Concerns about the proposed modification description or design, including comments regarding the broader transport network surrounding the Westlink M7, primarily regarding traffic on surrounding roads during operation of the proposed modification
- The options and alternatives considered in the development of the proposed modification, particularly focusing on the number of lanes proposed, the omission of public transport infrastructure, the location and design of intersections and entry/exit ramps, and traffic congestion
- Noise impacts, particularly in relation to road traffic impacts during operation
- Concerns about the temporary closure of sections of the Westlink M7 shared path during construction of the proposed modification
- Submitters requested that maintenance and upgrade of the existing shared path and adjoining facilities occur, and that new shared path connections are included in the design of the proposed modification. Suggestions for the installation and/or upgrades of toilet facilities, bubblers, rest/change areas, and E-bike charging stations was also raised
- Concerns about the permanent prohibition of cyclists on the mainline of the Westlink M7.

These issues have been further split into sub-categories, and responses to each are provided in Chapter 6 of the submissions received from the community and special interest groups, 50% of submitters who provided an address or suburb live within the local area (less than five kilometres from the construction footprint). Approximately 27 percent of submitters live within the surrounding region (five to 100 km from the construction footprint), whereas the final 23 percent did not provide an address or suburb. A plan of the different suburbs that submitters originate from is provided in Figure 3-2.

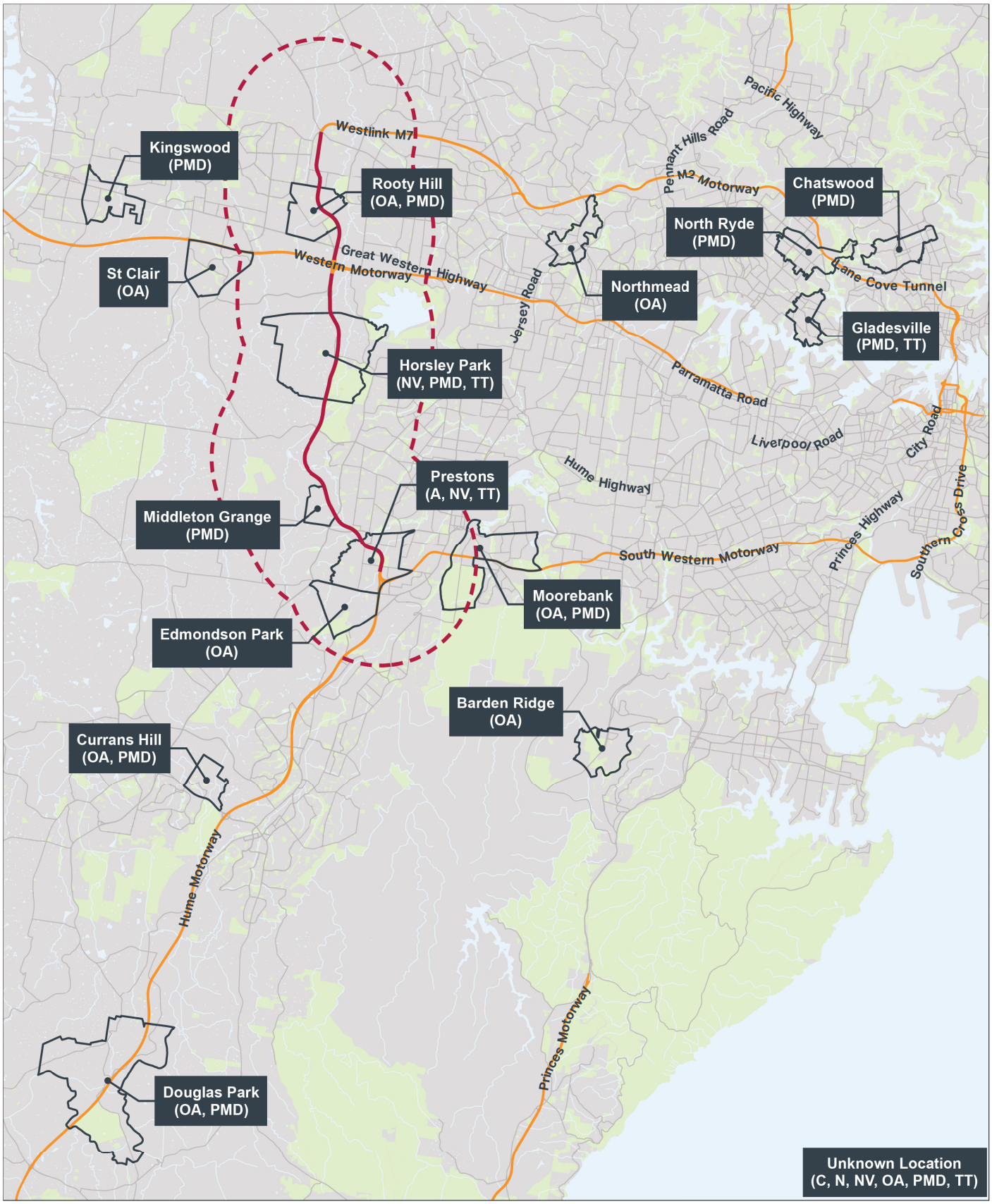

FIGURE 3-2: GEOGRAPHIC BREAKDOWN OF SUBMISSIONS

N 0 2.5 5 km

AECOM

Legend

- Proposed modification
- 5km buffer from proposed modification
- Motorway
- Primary road
- Suburb boundary

Symbol	Category
A	Air Quality
C	Consultation
N	Need for the modification and strategic context
NV	Noise and Vibration
OA	Options and alternatives
PMD	Proposed modification description/ design
TT	Traffic and Transport

Source:

4. Actions taken since exhibition

4.1 Project refinements

In response to submissions raised, Transport will investigate ways to improve the flood immunity of the shared path near Ash Road, Prestons, during detailed design as part of the proposed modification (see mitigation measure SW12).

4.2 Additional assessment

This section describes additional assessment that has been undertaken since the public exhibition of the Modification Report, in response to submissions/advice received.

4.2.1 Non-Aboriginal heritage addendum Statement of Heritage Impacts

An addendum Statement of Heritage Impact (SOHI) has been prepared (see Appendix F), as requested by Heritage NSW. The addendum SOHI has been prepared by a suitably qualified heritage consultant in accordance with the guidelines in the *NSW Heritage Manual* (NSW Heritage Office 1996). The addendum SOHI further investigated the potential indirect vibrational impacts on components of the Shaft No. 4 of the Upper Canal System (SHR 01273) in response to comments received by Heritage NSW and recommended mitigation measures.

The addendum contained an updated significance assessment, finding that the shaft, as an element itself, is considered to be of 'Exceptional' significance due to its direct association with the construction of the Cecil Hill Tunnel. The timber beams associated with it are considered to be of 'Moderate' significance, as they relate to the later closing of the shaft. The ballast material inside the shaft is considered to be of 'Some' heritage significance.

The results of the addendum SOHI were consistent with that of the Non-Aboriginal Heritage Impact Assessment (Appendix J of the Modification Report) in that the proposed modification would not have any direct impacts on the Shaft No. 4 and if the minimum working distances and any further structure-specific vibration criteria developed during detailed design are followed, the works would not cause any indirect impact to the Upper Canal System, including the Shaft No. 4.

An additional mitigation measure (H5) has been included (see Appendix B). Any proposed changes to the design or construction methodology in the vicinity of Shaft No.4 are to be reviewed by a suitably qualified heritage specialist to assess any changes to potential indirect vibration impacts.

4.2.2 Aboriginal heritage re-survey and further consultation

As part of the Aboriginal heritage assessment undertaken for the proposed modification, an area was re-surveyed with representatives of the Gandangara LALC at their request. Refer to Section 2.2.2 for further information.

As described in Section 2.2.2, additional consultation was also taken with the Aboriginal community in response to an advertising campaign, to connect with local people who have stories and particular connections with lands within the footprint of the proposed modification. Additional measures have been proposed as a result (refer new mitigation measure AH7 in Appendix B).

4.2.3 Proposed additional field surveys for the Southern Myotis

Microbat surveys for the Biodiversity Development Assessment Report (BDAR) were undertaken for the Modification Report in accordance with Appendix E of the Microbat Management Guidelines (Transport for NSW, 2021a). The Southern Myotis was presumed to be present for the purpose of the BDAR (Appendix H of the Modification Report), given that the field survey occurred outside of the recommended period of detection. It was identified that a total of 33 species credits for Southern Myotis would be required to offset impacts to its foraging habitat.

Additional field surveys will be undertaken to confirm whether Southern Myotis is present, to inform the Microbat Management Plan and to refine the offset obligation for this species. This would satisfy the request of the Department of Planning and Environment – Environment and Heritage Group and mitigation measure B3 from the modification report. At this stage, additional field surveys are expected to be undertaken in November 2022, which is within the survey period of October to March for this species, and therefore results are not yet be available to be included in this report.

Any potential impacts on microbats will be managed via the Microbat Management Plan (mitigation measure B1) as well as Appendix F of Microbat Management Guidelines (Transport for NSW, 2021a) (mitigation measure B4).

4.3 Clarifications and corrections

4.3.1 Clarifications

Clarifications to the Modification Report have been identified since public exhibition. These are presented below.

Maps of Noise Catchment Areas (NCAs)

The NCAs were labelled incorrectly on Figure 7-21 (Receivers eligible for consideration of additional feasible and reasonable noise mitigation measures [Sheet 6 of 11]) in the Modification Report. The NCAs are identified in Figure 4-2 below. The update does not change the outcome of the assessment.

Aboriginal heritage sites

The following sentence in Section 7.7.5 of the Modification Report: *"As previously indicated, none of these sites would not be impacted by the proposed modification. All construction activities in their vicinity would be restricted to the construction footprint for the proposed modification,"* should read as the following:

"*As previously indicated, none of these sites would be impacted by the proposed modification. All construction activities in their vicinity would be restricted to the construction footprint for the proposed modification.*"

Land acquisition and Aboriginal land claim

Where parts of the existing Westlink M7 are bridged structures that cross roads, parks and creeks, Transport generally holds stratum ownership along the alignment to allow for such crossings, and generally owns the land on which the current bridge piers are located.

Investigations have revealed that additional bridge piers are likely to be required to widen the Westlink M7. Acquisition may be required for new bridge piers (location and area to be determined by the detailed design) in the median adjacent to the existing bridges, and it is proposed that a construction lease will be entered into where required to facilitate construction of the bridge piers. No land acquisition from private landowners is expected.

In one location, the relevant land parcel appears to be subject to an Undetermined Aboriginal Land Claim lodged on 19 December 2016. The land parcel is Lot 1 DP 1110197. It is contained within Hoxton Park Reserve, Hinchinbrook, adjacent to Hoxton Park Road (refer Figure 4-1).

Transport is undertaking further investigations in relation to this land and any other acquisitions required for the proposed modification. Accordingly mitigation measure LUP6 has been added (refer Appendix B).

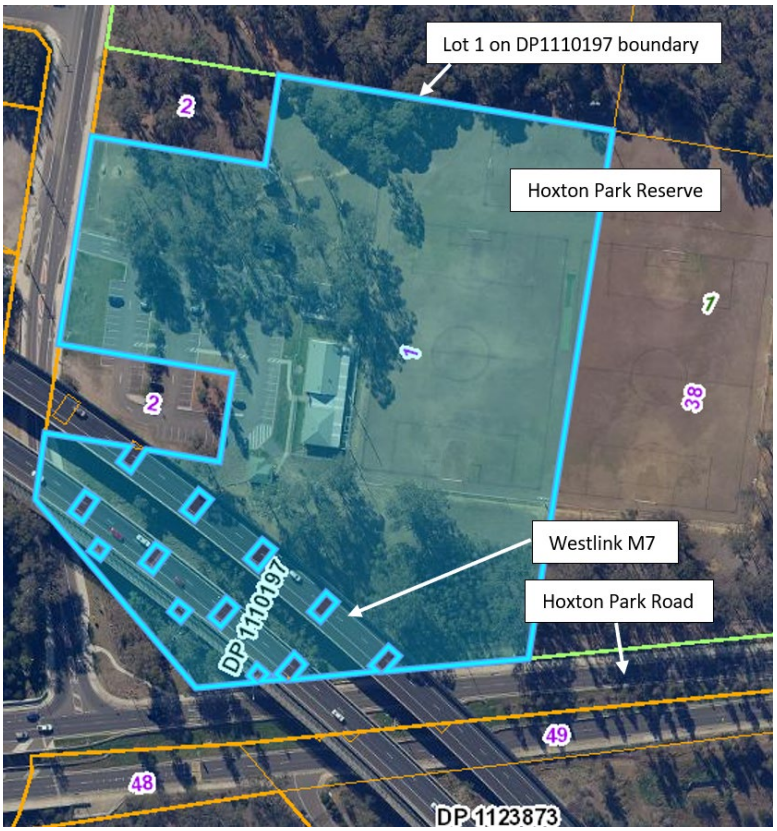

Figure 4-1: Hoxton Park Reserve

Construction hours

The Modification Report provides justification for, and assesses, extended construction hours on Mondays to Fridays (being 6.00am to 7.00pm) and on Saturdays (being 8.00am to 5.00pm). Upon review of the noise monitoring summaries undertaken for the proposed modification, it can be seen that the Rating Background Level (from which construction noise management levels are derived) is similar between the hours of 6am to 7am and 7am to 8am on weekdays; as well as between the hours of 6pm to 7pm and 5pm to 6pm on weekdays. Therefore, any construction noise impacts during these periods would be similar, and undertaking construction works at 6am instead of 7am, and to 7pm instead of 6pm, would not generate any additional noise level impact at sensitive receivers. The assessment has taken these extended construction hours into account.

In addition, all proposed construction activities have been assessed against the most stringent night-time criteria, and therefore construction noise impacts have not been underpredicted. The commencement of construction activities one hour earlier, or one hour later, would not introduce any additional real impact to the community, and would allow the proposed modification to reduce its overall construction schedule.

Transport would also to like to clarify that on Saturdays, construction of the proposed widening is proposed to be undertaken from 8am to 6pm (i.e. not 8am to 5pm Saturday, as was incorrectly stated in the Modification Report), which is consistent with the Conditions of Approval for the M12 Motorway project. Similar to the above, the Rating Background Level is similar between 5pm and 6pm. Therefore, any construction noise impacts during this additional hour would be similar, and continuing construction until 6pm on Saturdays would not generate additional noise level impact at sensitive receivers.

Any out of hours work would require further justification, assessment, and more detailed management, in addition to being subject to agreement by the EPA. Any consultation surrounding out of hours works would take place with consideration to the *Construction Noise and Vibration Guideline* and Strategy 2 of the *Interim Construction Noise Guideline*.

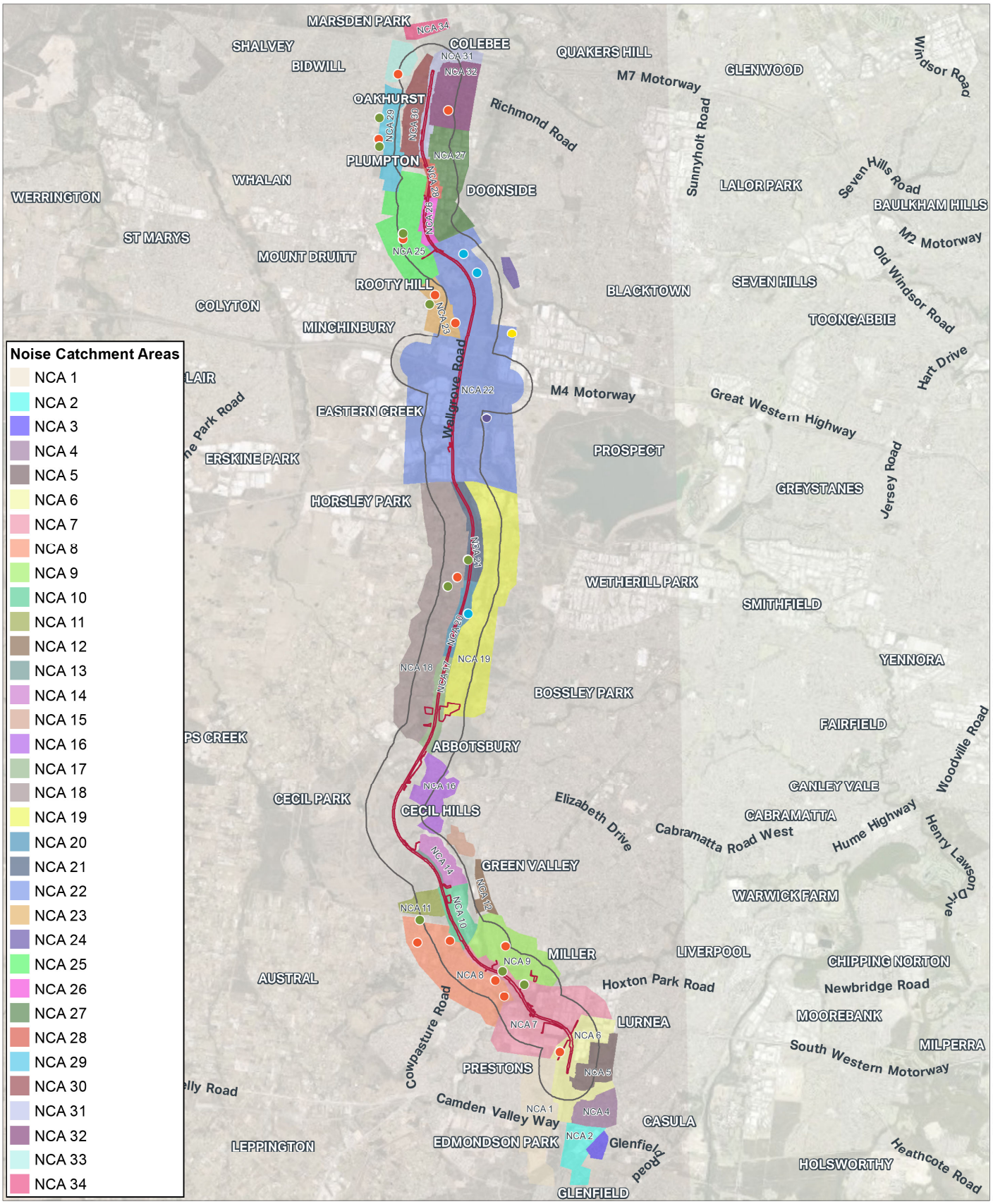

FIGURE 4-2: NOISE CATCHMENT AREAS AND NOISE SENSITIVE RECEPTORS

Legend

- Construction footprint
- Operational noise study area

Sensitive Receptors

- School
- Place of Worship
- Active Recreation Area
- Passive Recreation Area
- Passive & Active Recreation Area

N 0 1 2 km

AECOM

4.3.2 Updated environmental mitigation measures

Additions and updates have been made to the mitigation measures proposed, in response to feedback, submissions and agency advice received. These include the following:

Contamination

- Mitigation measure C1 has been revised to ensure the unexpected finds procedure prepared also manages unexpected contamination encountered during construction works.

Surface water

- Mitigation measure SW1 has been revised to include a requirement that enhanced sediment and erosion controls be implemented in areas where it is identified that contamination poses a risk to surface water quality
- Mitigation measure SW9 has been revised to include a requirement that locations for monitoring of surface water quality cover areas that are identified as being in moderate to high contamination risk areas
- Mitigation measure SW12 has been added to include a requirement for investigation into improving the flood immunity of the shared path near Ash Road, Prestons, as part of the proposed modification.
- Mitigation measure SW13 has been added to include a requirement that the water quality objectives are reviewed and updated where required to include consideration of the *Performance Criteria for Protecting and Improving the Blue Grid in the Wianamatta – South Creek Catchment* (DPIE, 2022)

Heritage

- Mitigation measure H4 has been amended to include reference to the *Guideline for Development Adjacent to the Upper Canal and Warragamba Pipelines* (WaterNSW, 2021)
- Mitigation measure H5 has been included to ensure that any changes to the design or construction methodology in the vicinity of Shaft No. 4 are reviewed by a suitably qualified heritage specialist to assess any changes to potential indirect vibration impacts
- Mitigation measure AH7 has been added, which includes recommendations from the Aboriginal community workshop described in Section 2.2.2 to be considered during detailed design and construction planning.

Land Use and Property

- Mitigation Measure LUP6 has been added to confirm land acquisitions required for the proposed modification.

Hazard and Risk

- Mitigation measure H5 has been included to ensure that any changes to the design or construction methodology in the vicinity of Shaft No. 4 are reviewed by a suitably qualified heritage specialist to assess any changes to potential indirect vibration impacts.

Climate Change

- Mitigation measure CC11 has been added, which aims to minimise the urban heat island effect associated with the proposed modification.

Refer to Appendix B to see the complete version of each mitigation measure.

5. Response to government agency submissions

5.1 Heritage NSW

Advice – Non-Aboriginal heritage

As delegate of the Heritage Council of NSW, the following comments on the modification reports are provided:

- The implementation of a robust Unexpected Finds Procedure(s) is supported
- The heritage assessment methodology supporting the proposal is considered suitable (Technical Report, Section 3.2)
- There is the potential for indirect vibrational impacts to the Upper Canal System during construction works. The recommended mitigation measure of vibration modelling and determining site specific minimum working distances is supported
- It is unlikely that there would be direct or indirect impacts to the Upper Canal System, including the Shaft No. 4. The Cecil Hills tunnel section of the SHR item is at least 30 metres below the existing motorway and the proposal would involve excavations of circa 1 metre depth. Underneath the modern above-ground access point of the Shaft No. 4 is circa 1.5 metres of ballast fill, laid above the original timber and brick air shaft (Technical Report, Section 5.1). The fill is assessed as non-significant and it is concluded that the fabric of the Shaft No. 4 would not be impacted by the proposed works (i.e. Technical Report, pages 51, 56). However, it is noted that the ballast fill is supported by "timber beams that have been present since its 1888 construction" (Technical Report, page 49). It therefore appears that these timbers may constitute original and potentially significant fabric of the SHR item. If this is the case, the assessment that "weathering of these beams may eventually result in their deterioration" would not diminish the significance of the timbers (Technical Report, page 49; SMEC Australia Pty Ltd, 2019, page 9). This matter is addressed by the recommended SEARS below.

It is recommended that the following SEARS is included for the modification:

- Heritage and archaeology
  - An addendum Statement of Heritage Impact (SOHI) for the Upper Canal System (SHR 01373) should be prepared by a suitably qualified heritage consultant in accordance with the guidelines in the NSW Heritage Manual. The addendum SOHI should include:
    - revised heritage significance assessment, including the significance of the timber beams associated with the ballast fill and Shaft No. 4, considered within the context of the SHR item
    - revised assessment of the impacts of the proposal on the SHR item, including consideration of the timber beams as (potential) in situ elements
    - revised discussion of the attempts to avoid and/or mitigate the impact on the heritage significance or cultural heritage values of the SHR item
    - revised discussion for any changes to the heritage fabric including any options analysis, including consideration of the timber beams
    - compliance with the relevant Conservation Management Plan(s).

As the proposed SSI is in the vicinity of items listed on the Blacktown Local Environmental Plan 2015, advice should be sought from the relevant local council.

Response

Transport acknowledges the support for the methodology, findings and mitigation measures of the non-Aboriginal heritage assessment prepared for the Modification Report (Appendix J).

In response to the comments received from Heritage NSW, an addendum SOHI has been prepared to assess the potential for impact to the timber beams associated with the ballast fill and Shaft No. 4. The results of the addendum SOHI were consistent with that of the Non-Aboriginal Heritage Impact Assessment (Appendix J of the Modification Report) in that the proposed modification would not have any direct impacts on the Shaft No. 4 and if the minimum working distances are followed, the works would not cause any indirect impact to the Upper Canal System, including the Shaft No. 4. An additional mitigation measure (H5) has been added to ensure that any proposed changes to the design or construction methodology in the vicinity of Shaft No.4 are reviewed by a suitably qualified heritage specialist to assess any changes to potential indirect vibration impacts.

The non-Aboriginal heritage assessment provided in Section 7.8 of the Modification Report found that there would be no impacts to heritage items listed in the Blacktown LEP (i.e. 'Archaeological site – Native Institution Site (LEP Reference A121), and 'Archaeological site – Ruins (former Government Depot site)' (LEP Reference A123)). Blacktown City Council's advice and Transport's response is found in Section 6.10 of this report.

The Non-Aboriginal heritage addendum SOHI can be found in Appendix F of this Submissions Report.

Advice – Aboriginal Heritage

The Archaeological Survey Report (ASR) concludes that no further impact assessment is required in relation to Aboriginal cultural heritage. Based on the information provided in the ASR, Heritage NSW concurs that no additional assessment in relation to Aboriginal cultural heritage is required, and as such, further agency consultation is not required in relation to Modification 6, M7 Motorway (SSI-663).

Response

Transport acknowledges that Heritage NSW concurs that no additional assessment in relation to Aboriginal cultural heritage is required, and as such, further agency consultation on this matter is not required.

5.2 Water NSW

Advice – Upper Canal – Shaft 4

WaterNSW requested that the proponent address the following in their response to submissions:

- Traffic and Transport – WaterNSW access to shaft 4 during construction and operation. WaterNSW suggests that construction access arrangements be included in any Construction Traffic and Access Management Plan (CTAMP) for WaterNSW's safe access to and operation of the asset. In addition, a new mitigation measure under operational capacity could be included to address future access needs for all users
- Noise and vibration – Heritage and other sensitive structures are more prone to vibration impacts. The Upper Canal, specifically shaft 4, is recognised in the report as being the only State heritage listed asset impacted by the works, however the noise and vibration section does not specifically recognise this impact or the asset. To ensure the link between impact and mitigation measure, the Upper Canal should be recognised as a sensitive structure.

There is potential for the road to impact on the Upper Canal if WaterNSW's requirements are not adequately met. However, WaterNSW acknowledge the ongoing consultation between the M7 project team and WaterNSW, and notes that the project team has incorporated mitigation measures in their design to address our requirements.

Response

Transport acknowledge and agree to the inclusion of construction access arrangements for WaterNSW to the Shaft No. 4 in the Construction Traffic and Access Management Plan (CTAMP) (required under mitigation measure T1 of the Modification Report). Operational access arrangements would be as per the existing arrangements.

The heritage listed item Shaft No. 4 is identified and assessed in Section 7.8 (Non-Aboriginal heritage assessment) and Appendix J of the Modification Report, with mitigation measures proposed to address potential indirect impacts (from vibration). Specifically, mitigation measures H1 to H4 will reduce the likelihood of potential impacts to the Upper Canal System, including Shaft No. 4. Mitigation measure H2 states that the vibration recommendations in the Noise and Vibration Assessment (Appendix E of the Modification Report) must be adhered to.

Section 7.2 (Noise and vibration) of the Modification Report cross-referenced Section 7.8 (Non-Aboriginal heritage) for identification of the non-Aboriginal heritage items in the vicinity of the proposed modification, which included the No.4 Shaft (Upper Canal System), and also proposed relevant vibration criteria and monitoring to address indirect impacts.

Specifically, mitigation measure NV14 requires a detailed survey to be undertaken prior to vibration intensive construction commencing to identify all nearby vibration sensitive buildings and structures. Applicable vibration criteria and construction strategies will be included in the Construction Noise and Vibration Management Plan (CNVMP).

Further, an addendum to the non-Aboriginal heritage assessment report has been prepared as part of this Submissions Report (refer Appendix F and Section 5.1), which further looks at indirect vibrational impacts on components of the Shaft No. 4.

The addendum found that the results of the addendum SOHI were consistent with that of the Non-Aboriginal Heritage Impact Assessment (Appendix J of the Modification Report) in that the proposed modification would not have any direct impacts on the Shaft No. 4 provided and provided that the minimum working distances are followed, the works would not cause any indirect impact to the Upper Canal System, including the Shaft No. 4.

Mitigation measure H5 (Appendix B) has been added to ensure that any changes to the design or construction methodology in the vicinity of Shaft No. 4 are reviewed by a suitably qualified heritage specialist to assess any changes to potential indirect vibration impacts.

Advice – Suggested conditions

Based on the information provided, WaterNSW has no objection to the proposed development, and requests that the suggested conditions (Attachment 1) are considered by the Minister, if approving the project.

Response

The suggested conditions will be considered by the Minister when considering the modification application.

5.3 Department of Planning and Environment – Water

Advice

DPE Water reviewed the Modification Report, and provided the following recommendation:

- Post Approval Recommendation – Works within waterfront land must be in accordance with the Guidelines for Controlled Activities on Waterfront Land.

  Explanation

  The modification notes there will be increased flow velocities from outlets, therefore appropriate scour protection should be implemented.

  The guidelines are available at: https://water.dpie.nsw.gov.au/licensing-and-trade/approvals/controlled-activity-approvals/what/guidelines

Please note that the licensing and approval function has now moved from NSW Department of Natural Resources Access Regulator to DPE Water.

Response

The proposed modification would involve works on waterfront land as defined under the *Water Management Act 2000*, being works within 40 metres of a waterbody, and would also result in minor increases in flow velocities from outlets during construction and operation.

Appropriate mitigation measures have been included in the Modification Report as presented below.

Chapter 7.4 (Hydrology and flooding) of the Modification Report, mitigation measure FL9 for impacts during construction and operation of the proposed modification:

- Scour protection and energy dissipation measures will be provided to manage localised increases in flow velocity at drainage outlets.

Chapter 7.5 (Surface water and groundwater) of the Modification Report, mitigation measure SW7 to manage construction activities within watercourses, especially works to widen bridges:

- Implementing bank stabilisation, channel re-shaping and scour protection where required to mitigate the impact of additional bridge piers on scour and stability of the bed and banks of watercourses
- Taking into consideration the former NSW Department of Industry's Guidelines for controlled activities on waterfront land (2018) in the design and construction of works within watercourses.

As noted in Section 5.3 of the Modification Report, a controlled activity approval for works on waterfront land under section 91 of the *Water Management Act 2000* is not required for the proposed modification (pursuant to section 5.23 of the EP&A Act for State Significant Infrastructure projects).

5.4 Environmental Protection Authority

Advice – construction traffic noise

It is noted that extensive works will be required outside the standard construction hours in the *Interim Construction Noise Guideline* (EPA, 2009) (ICNG) to limit impacts on the traffic network during peak periods, for worker and road user safety, and where a Road Occupancy Licence is needed. The EPA advises that all feasible and reasonable noise mitigation and management measures should be implemented to address any noise impacts from construction traffic utilising the local road network, particularly during out of hours works (OOHW).

Response

Feasible and reasonable noise mitigations measures will be implemented during construction to address potential construction traffic noise impacts.

Mitigation measures NV1, NV7, NV15, NV16 and T1 in the Modification Report detail measures to mitigate impacts from construction related traffic. NV1 requires a Construction Noise and Vibration Management Plan (CNVMP) be prepared in which feasible and reasonable mitigation measures are detailed. NV7 details specific mitigation measures related to construction traffic. NV15 and NV 16 contain measures to address noise impacts from construction traffic detours, and T1 requires a Construction Traffic and Access Management Plan (CTAMP) be prepared as part of the Construction Environmental Management Plan (CEMP).

Advice – traffic noise from construction detours

The Noise and Vibration Technical Report [Noise and Vibration Impact Assessment (NVIA)] has indicated, in Section 4.5, significant relative increases in noise levels on the local road network where traffic detours are in place on the Westlink M7 to allow some works, such as bridge widening. Changes of this nature are likely to give rise to community reaction and the EPA recommends that all feasible and reasonable measures, including respite periods – such as those put forward in Section 4.5 of the [NVIA] – are implemented to address noise impacts from traffic that is detoured off the Westlink M7 wherever practicable.

Response

As mentioned above, mitigation measure NV1 requires preparation of a CNVMP which will detail feasible and reasonable mitigation measures to mitigate construction related noise impacts, including from detoured traffic.

The respite periods put forward in Section 4.5 of the NVIA (Appendix E of the Modification Report) have been included in mitigation NV15 of the Modification Report. NV16 also includes measures for addressing noise impacts from construction traffic detours based on noise assessment during detailed design, which may include limiting the duration of traffic diversions, notifications and briefings to the community and individuals.

Advice – changes to policy since the approved project

A proposed change to Condition 91 relating to the installation of noise mitigation measures refers to the Environmental Criteria for Road Traffic Noise which has been superseded and replaced by the NSW Road Noise Policy (DECCW, 2011) (RNP). The EPA is not able to provide any specific advice on the appropriateness or otherwise of this proposed change as it is unclear which residences the proposed changes apply to, and the operational traffic noise impacts at those residences under the current RNP. The EPA recommends that DPE carefully consider the implications of the proposed changes to the condition in the context of the project and the current RNP, and all conditions should be updated to refer to current policy guidance.

Response

Transport acknowledges the advice to DPE. The assessment of road noise in the Noise and Vibration Assessment prepared for the proposed modification (Appendix E of the Modification Report) was undertaken in accordance with the Road Noise Policy (DECCW, 2011).

Advice – water quality

The EPA's review of the Surface Water and Flooding Impact Assessment (SWFIA) has found that the stormwater assessment is not based on appropriate guidelines and objectives. Water quality criteria are not clear for developing post-approval plans or detailed designs for identified contaminated areas. The EPA recommends that further information is provided on these matters to inform the post-approval management plans.

Response

Responses to the EPA's concern regarding the guidelines and objectives used in the SWFIA are detailed below for each specific concern raised.

Advice – proposed erosion and sediment control measures

The proposed erosion and sediment controls may be suitable in uncontaminated areas. However, the EPA recommends that *Managing Urban Stormwater: Soils and Construction, Volume 2D Main road construction* (DECC 2008) is referenced when developing the SWMP.

Response

The relevance of *Managing Urban Stormwater: Soils and Construction, Volume 2D Main road construction* (DECC 2008) to the construction of the proposed modification and the development of the associated Soil and Water Management Pan (SWMP) has been recognised in the Modification Report. Section 3.1.2 of the SWFIA (Appendix G of the Modification Report) identifies the following volumes of the *Managing Urban Stormwater – Soils and Construction* series (commonly referred to as the 'Blue Book') as being relevant to the construction of the proposed modification:

- Volume 1 (Landcom, 2004)
- Volume 2D – Main Roads (DECC), 2008).

Mitigation measure SW01, requires a SWMP be prepared as part of the proposed modification. The plan would outline measures to manage soil and water impacts associated with the construction works, including works in areas which have risk of existing contamination. Specifically, SW01, requires that erosion and sediment control measures be implemented and maintained in accordance with the principles and requirements in Managing Urban Stormwater – Soils and Construction, Volume 1 (Landcom, 2004) and Volume 2D (DECC, 2008), as well as relevant Transport guidelines.

Advice – suitability of the criteria for treated runoff discharge during construction

The SWFIA adopts the Managing Urban Stormwater Volume 1 total suspended solids (TSS) concentrations of no greater than 50 mg/L for treated runoff discharging during construction. The EPA recommends that the following further information is provided:

- Appropriate assessment criteria and how they would be measured, including ANZG (2018) and, where relevant, *Performance criteria for protecting and improving the blue grid in the Wianamatta – South Creek catchment DPIE* (2021a). It should be noted that discharge criteria for similar sites in this area of Sydney have achieved around 30 to 40 mg/L TSS
- How discharge quality would be measured on site.

Response

While Section 6.1.3 of the SWFIA notes that Managing Urban Stormwater Volume 1 requires treated runoff discharging from a construction site to have a TSS concentration that is no greater than 50 mg/L, the following is also stated:

"Further water quality assessment would be undertaken during detailed design to determine whether additional site-specific discharge criteria are required to meet the objective of maintaining or improving existing water quality in the receiving watercourses. This further assessment would be based on the results of water quality monitoring in the receiving watercourses, the initial results of which are presented in Section 5.6 of this report. Further details of the water quality monitoring that will be undertaken during construction are set out in Section 9.2."

In consideration of the recommendations by the EPA and noting that ANZG (2018) does not provide specific trigger levels for TSS, it is proposed that the construction discharge water quality impact assessment be based on turbidity rather than TSS. Table 4.2 of the SWFIA identifies a guideline value of 50 NTU for the protection of aquatic ecosystems in lowland rivers and in slightly to moderately disturbed ecosystems and slightly disturbed catchments, all of which are relevant to the study area. This guideline value is based on ANZG (2018), which refers to the *Australian and New Zealand Guidelines for Fresh and Marine Water Quality* (ANZECC Water Quality Guidelines) (Australian and New Zealand and Conservation Council, 2000) in the absence of updated trigger levels for the East Coast of Australia.

It is also noted that a water quality objective guideline value of 50 NTU for turbidity is also consistent with the ambient water quality value provided in Table 4 of *Performance Criteria for Protecting and Improving the Blue Grid in the Wianamatta – South Creek catchment* (DPIE, 2021a) (performance criteria for Wianamatta – South Creek catchment). Therefore, the adoption of a guideline value of 50 NTU for turbidity in the assessment of the impact of construction discharges on water quality would be consistent with the EPA recommendation of adopting assessment criteria that is consistent with both ANZG (2018) and performance criteria for Wianamatta – South Creek catchment. The ANZECC Guidelines regarding default trigger levels for turbidity state:

"*Values at the low end of the range would be found in rivers flowing through well vegetated catchments and at low flows. Values at the high end of the range would be found in rivers draining slightly disturbed catchments and in many rivers at high flows.*"

Therefore, it has been interpreted that the values at the high end of the range (50 NTU) apply to both rivers draining slightly disturbed catchments and rivers flowing through well vegetated catchments at high flows. The latter would be applicable to the catchments within which the proposed modification is located. Notwithstanding this, we acknowledge EPA's comment regarding the National Water Quality Management Strategy and so the existing water quality in the receiving watercourses would also be taken into consideration when establishing an appropriate set of discharge criteria during detailed design to apply during construction. A new mitigation measure SW13 has been added to include a requirement that the water quality objectives are reviewed and updated where required to include consideration of the *Performance Criteria for Protecting and Improving the Blue Grid in the Wianamatta – South Creek Catchment* (DPIE, 2022)

Based on review of the water quality monitoring data that has been collected over a 12 month period within the creeks that would receive runoff from the proposed modification, no clear trend has been observed between TSS and NTU. For this reason we have proposed to adopt an approach that is consistent with that which was recently applied to the M12 Motorway whereby the construction assessment is based on NTU rather than TSS. Adoption of an NTU based criteria also lends itself to field-based monitoring of water quality in construction basins and sumps.

It is proposed that the above criteria form the basis of a construction discharge water quality impact assessment that would be prepared during the detailed design and construction planning stage of the proposed modification to inform the conditions to be included in the Environmental Protection Licence for the construction of the proposed modification. The construction discharge water quality impact assessment will also set out measures that will be adopted in the construction of the proposed modification to manage its impact on other water quality parameters, such as pH and oils and greases.

The construction discharge water quality impact assessment will adopt the methodology set out in the Draft Guideline for *Assessing the Impacts of Treated Water Discharge from Water Quality Treatment Controls* (Transport

for NSW, 2020) to estimate the potential impact of construction discharges on water quality in the receiving watercourses. The methodology set out in the Draft Guideline for *Assessing the Impacts of Treated Water Discharge from Water Quality Treatment Controls* is based on the risk-based framework for considering waterway health outcomes in strategic land-use planning decisions (Office of Environment and Heritage (OEH) and EPA 2017) and the water management framework adopted in ANZG (2018). This guideline has recently been used to undertake a construction discharge impact assessment to inform the conditions to be included in the Environmental Protection Licence that has been granted by EPA for the construction of the M12 Motorway. A similar approach is proposed to be adopted for the preparation of the construction discharge impact assessment to inform the conditions to be included in the Environmental Protection Licence for the proposed modification.

Sediment retention basins or sumps would be used to control runoff from the construction of the proposed modification where they are identified as being required due to the areas of disturbance and volume of sediment generated, or due to the presence of contaminated soils.

Local erosion and sediment control measures would only be used in lieu of retention basins or sumps where it can be demonstrated that:

- Such measures would adequately manage the risk of erosion and sedimentation in accordance with Volume 1 and 2D of the Blue Book, and
- Contaminated soils do not pose a risk to water quality.

Runoff from the construction of the road widening would be controlled by the existing stormwater drainage systems along the motorway, which direct runoff to existing water quality controls prior to discharge from the motorway corridor. As noted in Section 5.5.1 of the SWFIA these existing water quality controls typically comprise water quality control ponds with spill containment provisions. Therefore, where sediment retention basins or sumps are required but their application is restricted by site constraints, then the existing stormwater quality control ponds would provide an alternative to monitor and control the discharge of runoff from the construction of the road widening. The construction discharge impact assessment would consider the potentially contaminated areas as part of the development of containment and treatment measures for potentially contaminated runoff.

The Soil and Water Management Plan that will be prepared during the detailed design and construction planning stages of the proposed modification would set out the procedures for monitoring and managing the quality of water discharging from the sediment retention basins and sumps, or from existing water quality control ponds where these are identified as also being required to manage the quality of runoff during the construction of the proposed modification.

During construction, a water quality monitoring program will also be put in place to measure the quality of runoff in the receiving drainage lines, which will also be used to validate the effectiveness of erosion and sediment controls and identify areas where modification or augmentation of erosion and sediment controls may be required.

Advice – mitigation measures for contaminated areas

Erosion and sediment controls based on Landcom (2004) and DECC (2008) are generally not adequate for areas of moderate to high contamination risk due to risk of dissolved and sediment attached contaminants entering stormwater. The EPA recommends the following:

(1) Further information is provided on appropriate erosion and sediment controls suitable for contaminated areas and on appropriate assessment criteria and how they would be measured if discharges are proposed. Criteria must be based on ANZG (2018) and, where relevant, Performance Criteria for Protecting and Improving the Blue Grid in the Wianamatta – South Creek Catchment (DPIE, 2021a).

(2) The proponent considers options to avoid contaminated stormwater discharges in the first instance.

(3) Any proposed controlled discharges are adequately treated to achieve the appropriate ambient water quality outcomes based on ANZG (2018) and, where relevant, DPIE (2021).

(4) The proponent considers the need for stormwater containment/basins or other mitigation measures to prevent contaminated stormwater entering waterways. Any basin used must be appropriately sized to mitigate risks identified through the detailed site investigation and that managed overflows only occur as a result of large rainfall events.

(5) Appropriate management criteria and responses to identify and manage water pollution risks associated with potentially contaminated stormwater are developed.

(6) The proponent includes surface water monitoring in moderate to high contamination risk areas that include all pollutants potentially present at non-trivial levels.

(7) Enhanced sediment and erosion controls are implemented as a precautionary approach in identified lower contamination risk areas.

Response

In response to points 1, 3 and 4:

Mitigation measures will be adopted that avoid the discharge of contaminated runoff into receiving watercourses. The assessment criteria for discharges from contaminated areas would be based on the water quality objectives that are provided in Table 4.2 of the SWFIA, which have been developed based on ANZG (2018). Where a particular contaminant is not identified in Table 4.2, then the ANZG (2018) toxicant guidelines would be referenced in establishing the relevant guidelines to be adopted in the discharge impact assessment for in the vicinity of potentially contaminated areas identified by the Contamination Impact Assessment (Appendix L of the Modification Report). During detailed design and construction planning, the water quality objectives would be reviewed and updated to ensure they are consistent with the Water quality and Flow objectives in Table 4 and 5 of the performance criteria for Wianamatta – South Creek catchment. Mitigation measure C1 has been updated accordingly as noted below.

Where feasible, the proposed modification would be constructed in a way that prevents runoff from contaminated areas. Where this is not feasible a discharge impact assessment would be carried out for contaminated areas to determine the appropriate sizing of measures to manage the impact of runoff in accordance with the water quality objectives set out in Table 4.2 of the SWFIA and the ANZG (2018) toxicant guidelines. Basins and other erosion and sediment controls will be sized in accordance with the procedures set out in the *Managing Urban Stormwater – Soils and Construction, Volume 1* (Landcom 2004) and *Volume 2D* (DECCW 2008), commonly referred to as the "Blue Book", as well as relevant Transport guidelines.

Runoff collected in the detention basins, sumps or existing water quality control ponds will be monitored and treated as required to meet the adopted discharge criteria prior to its release into the receiving watercourses.

Mitigation measure C1 in the Modification Report identifies the following measures to be included in the SWMP:

- Process for testing, treating and discharging water from site to meet applicable water quality limits
- Site-specific Erosion and Sediment Control Plan which will identify detailed measures and controls, that are consistent with the practices and principles in the current guidelines, to be applied to minimise erosion and sediment control risks. These include, but not necessarily limited to: runoff, diversion and drainage points; use of sediment basins and sumps; scour protection; stabilising disturbed areas as soon as possible, check dams, fencing and swales, and staged implementation arrangements.

In response to points 2, 5, 6 and 7:

Contaminated areas will be identified during the detailed site investigation (DSI) and other investigations of the proposed ancillary facilities. The DSI will inform areas of impact so that water pollution risks can be managed and minimised. Contaminated areas will be managed per the soil and contamination mitigation measures – C1 to C7 in the Modification Report. Additional mitigation measures required for low and high risk contaminated areas would be developed during detailed design, once further assessment has been completed and would be included in the Soil and Water Management Plan.

Mitigation measure SW9 has been updated to include a requirement that surface water quality at or near moderate to high contaminated risk areas is monitored for relevant contaminants.

Mitigation measure SW1 has been updated to include a requirement that enhanced sediment and erosion controls be implemented during construction in areas where it is identified that contamination poses a risk to surface water quality (refer to Appendix B).

Advice – further information provide on Dewatering Management Plan

The SWFIA proposes that, during detailed construction planning, a dewatering management plan (DMP) would be prepared that sets out the procedures for the discharge of surface water runoff that is retained in sediment controls and exposed excavations. … The EPA recommends that further information is provided on a dewatering assessment based on ANZG (2018) and DPIE (2022), in particular in areas of contamination, including the assessment criteria and management measures to achieve the criteria, e.g. management of any leached pollutants from contaminated soils into stormwater collected in workings, including collection and treatment or disposal offsite.

Response

A DMP will be prepared and included in the SWMP as per mitigation measure SW2 in the Modification Report. Discussion around achieving ANZG (2018) and DPIE (2021) criteria is provided in the response above.

Advice – Management of contaminated groundwater

The Modification Report states that there is potential for contaminated groundwater to be encountered while bridge pilings are being constructed.

The EPA recommends:

- That temporary casings are used during construction works
- That Managing Urban Stormwater, Soils and Construction, Volume 2D: Main Road Construction is referenced when developing the proposed SWMP for these bridges and where relevant, Managing Urban Stormwater: Soils and construction - Volume 2A - Installation of services, and
- That extracted contaminated groundwater is not discharged to waters.

Response

Transport acknowledges the recommendation to use temporary casings during construction works. The use of temporary casings would be confirmed by the construction contractor during the detailed design and construction planning stages of the proposed modification.

As detailed in mitigation measure SW1, *Managing Urban Stormwater – Soils and Construction, Volume 1* (DPIE, 2004) and *Volume 2D* (DECC, 2008a) will be considered when developing the SWMP. *Managing Urban Stormwater: Soils and construction - Volume 2A - Installation of services* may also be considered, where relevant.

As described in Appendix L of the Modification Report, groundwater (included any contaminated groundwater) extracted from excavations during piling would be minimal and is expected to be disposed of off-site. This would be managed by the contractor in accordance with relevant CoA and EPL conditions.

Advice – appropriate assessment criteria for operation stage stormwater

The Modification Report generally concludes that there is negligible difference in the ability of the current operational stormwater quality controls to meet the water quality objectives between pre-and post-proposed modification conditions. The report also states that: "*in the instance that during detailed design it cannot be demonstrated that the existing operational stormwater quality controls would be effective in mitigating potential impacts in accordance with the above requirements, then additional mitigation measures would be identified and implemented*. …"

The EPA recommends that further information is provided on the use of appropriate assessment criteria, i.e. based on ANZG (2018) and, for waterways in the Wianamatta – South Creek catchment, performance criteria for Wianamatta – South Creek catchment. These criteria should form the basis of the detailed design assessments when reviewing existing operational stormwater controls.

Response

The criteria that have been established for the surface water assessment as part of the Modification Report is reflected in the water quality objectives (WQOs) that are set out in Section 4.1.3 of the SWFIA.

Table 4.2 of the SWFIA (reproduced as Table 7-41 in the Modification Report) sets out the WQOs that were established for the proposed modification. The guideline values for each WQO set out in Table 4.2 of the SWFIA were based on ANZG (2018), which references the *Australian and New Zealand Guidelines for Fresh and Marine Water Quality* (ANZECC Water Quality Guidelines) (Australian and New Zealand and Conservation Council 2000) where trigger levels have not yet been updated for the East Coast of Australia.

While the Modification Report notes that there is negligible difference in the ability of the current operational stormwater quality controls to meet the WQOs between pre- and post-proposed modification conditions, it also provides the following key findings in regard to the ability of the stormwater quality controls to meet the WQOs:

- Under both existing conditions and the proposed modification, the median concentrations of TSS and turbidity are below the guideline values set out in the WQOs and are typically less than or similar to the levels recorded in the receiving watercourses. On this basis it can be concluded that the stormwater quality controls achieve the WQOs related to these two indicators.
  - Under both existing conditions and the proposed modification, the median concentrations of Total Phosphorus (TP) and Total Nitrogen (TN) are:
    - Generally, above the guideline values set out in the WQOs
    - Within the range of concentration levels for total discharge into the major creek systems of Cabramatta Creek, Ropes Creek and Eastern Creek
    - Below the concentration levels that have been measured in Upper Hinchinbrook Creek, Bells Creek and Angus Creek as part of the sampling undertaken for the proposed modification (providing an improvement in water quality at these waterways where the WQOs are not currently being)
    - Below the concentration level of TP that has been measured in Maxwells Creek, Cabramatta Creek, Lower Hinchinbrook Creek and Eskdale Creek as part of the sampling that has been undertaken for the modification (providing an improvement in water quality at these waterways where the WQOs are not currently being met), but higher than the corresponding concentration levels of TN (does not currently contribute to meeting the WQOs at these locations over time).

The criteria against which the existing water quality controls will be assessed during detailed design is set out in mitigation measure SW8, as follows:

- The performance of the stormwater quality controls that are set out in the Modification Report (comprising the existing stormwater quality control basins and gross pollutant traps along the Westlink M7 corridor) will be verified at detailed design stage to ensure that for waterways that receive runoff from the proposed modification, and to the extent that the proposed modification can influence:
  - The water quality objectives continue to be met at waterways where they are currently being achieved, or
  - Existing water quality is improved at waterways where the water quality objectives are not being met.

In the instance that during detailed design it cannot be demonstrated that the water quality controls will be effective in mitigating potential impacts in accordance with the above requirements, a review of measures will be undertaken to improve water quality outputs from the Westlink M7 over time, including an assessment of the potential benefits and feasibility or reasonableness of converting a select number of existing water quality control basins to bioretention basins, in consultation with NSW EPA.

Due to the timing of the release of performance criteria for Wianamatta – South Creek catchment it was not considered in the development of the WQOs that are set out in Section 4.1.3 of the SWFIA. However, based on comparison of Table 4 of performance criteria for Wianamatta – South Creek catchment with the results presented in Table 7.4 of the SWFIA it is noted that the median pollutant concentrations discharging from the Westlink M7 water quality controls within the Wianamatta – South Creek catchment (i.e. Ropes Creek and Eastern Creek catchments) are consistently lower than the ambient water quality values that are provided in performance criteria for Wianamatta – South Creek catchment .

Advice – contamination

The assessment noted limited information regarding the construction of the existing Westlink M7. Available investigations undertaken prior to the construction of the motorway (pre-2003) indicated that site inspections and intrusive soil investigations were conducted at areas considered to be high risk of contamination from site activities. However, not all reports for these investigations were obtained, and available information was limited. As such it is not known if identified contamination was remediated. The assessment has assumed that contaminated material was either taken off site or remains inside the existing Westlink M7 corridor in isolated areas.

Similarly, there is no information regarding the source of imported fill material. The report has assumed it is either virgin excavated natural material or excavated natural material.

The EPA notes that a detailed site investigation (DSI) targeting areas of concern had commenced along the median but had not been completed at the time the contamination assessment was written. The report states that the DSI is due to be completed by mid-August 2022.

The EPA requests that the outcomes of the detailed investigation(s) be provided as part of a Response to Submissions to indicate whether contamination has been found to be present, if the nature and extent of that contamination has been determined, and if remediation is required.

The EPA also recommends that an Unexpected Finds Protocol be prepared to ensure that any unexpected contamination encountered during construction works are appropriately managed.

Response

Mitigation measure C1 contains a requirement to include an unexpected finds procedure in the SWMP.

5.5 Department of Planning and Environment - Environment and Heritage Group (EHG)

Advice – Microbats

The Biodiversity Development Assessment Report (BDAR) acknowledges that the microbat surveys were not undertaken in the appropriate season as required by the EHG survey guidelines for species credit threatened bats and their habitats. The microbat surveys identify three bridges to be moderate potential habitat, and the BDAR recommends that if during construction, microbats are observed exiting the bridge, then works should be ceased. However, EHG considers this would put microbats at high risk of predation if they were present. EHG notes the BDAR recommends a Microbat Management Plan is prepared.

EHG recommends that to inform the preparation of the plan, additional surveys be undertaken in accordance with the survey guidelines, at the three bridges identified as having moderate potential habitat.

It is noted the BDAR recommends that field surveys in accordance with the bat survey guidelines and Threatened Biodiversity Data Collection be undertaken in spring or summer to determine whether Southern Myotis is using the subject land for its foraging purposes. EHG recommends that this be undertaken this spring and be reported on in the Response to Submissions.

Response

The Southern Myotis was presumed to be present for the purpose of the BDAR (Appendix H of the Modification Report), given that the field survey occurred outside of the recommended period of detection. It was identified that a total of 33 species credits for Southern Myotis would be required to offset impacts to its foraging habitat.

The Modification Report includes mitigation measure B3, which requires field surveys be carried out to confirm whether Southern Myotis is present, to inform the Microbat Management Plan and to refine the offset obligation for this species, as required. At this stage, additional field surveys are expected to be undertaken in November 2022, and therefore results are not able to be included in this report. The additional field surveys would be used to inform the Microbat Management Plan.

In accordance with the Microbat Management Guidelines (Transport for NSW,2021a) a microbat specialist will determine the appropriate techniques, effort and timing for surveys depending on the structure as well as the likelihood of breeding habitat present. The application of any survey techniques chosen will be consistent with the descriptions provided in the BAM Guidelines (Transport for NSW, 2020a).

Potential impacts on microbats will be managed via the Microbat Management Plan (mitigation measure B1) as well as Appendix F of Microbat Management Guidelines (Transport for NSW, 2021a) (mitigation measure B4).

Advice – Threatened Flora

The proposal would impact areas of PCT 724 and PCT 725 in moderate condition. Table 5 of the BDAR lists several threatened flora species that occur in these PCTs but the table states that these PCTs are too degraded to support suitable habitat for any of these species. EHG considers many of these species could occur in moderate condition vegetation, and as such, their exclusion is not adequately justified. However, EHG acknowledges that the areas of PCT 724 and PCT 725 in the subject land are small and restricted, and as no threatened flora species were observed during vegetation surveys, EHG considers they are unlikely to be present.

Opportunities to further avoid or reduce impacts to vegetation would be considered during detailed design.

Response

Chapter 5 of the BAM (DPIE 2020a) was referred to when assessing whether further assessment, including targeted survey for threatened species, was required. Table 5 of the BDAR details the list of candidates and threatened flora species identified as requiring further assessment and also includes the associated PCT for each species (as identified in the Threatened Biodiversity Data Collection) and identifies whether targeted surveys were required/undertaken. Where species presence could not be ruled out based on lack of associated plant community types (PCTs) or quality of habitat, a conservative approach was taken, and targeted surveys conducted.

For most species the vegetation was considered too degraded to support suitable habitat for the plant. Factors contributing to its degraded nature include, previous clearing, presence of high threat weeds, modified PCT composition, disturbed topsoil, compacted ground and fragmented character.

Transport acknowledges that DPE - Environment and Heritage agree with the overall conclusion that threatened flora species are unlikely to be present due to the results of the targeted surveys and fragmented nature of the areas of PCT 724 and PCT 725.

Opportunities to further avoid or reduce impacts to vegetation would be considered during detailed design.

Advice – Revegetation

Further to the above, EHG has also reviewed the urban design, landscape, and visual impact assessment (the landscape assessment) prepared by AECOM, dated 28 June 2022. The landscape assessment proposes River-flat Eucalypt Forest revegetation below and adjacent to several bridges.

EHG supports this action however recommends these areas be subject to a Vegetation Management Plan (VMP) that is developed and implemented by a suitably qualified ecologist in consultation with a bushland regenerator. Plant species used in any regeneration works should be local provenance native species representative of the plant community type (PCT) present in each location (as identified in the BDAR). In addition to revegetation the VMP should address other management issues such as weed management, erosion and sediment control/bank stabilisation, rubbish removal and habitat supplementation.

The landscape assessment also identified opportunities for further tree planting. The species identified for use in these locations (Table 8) should be representative of the existing PCTs present (if any) within the proposed planting area. EHG notes that two Acacia species are proposed for these areas however as these are generally short-lived species, from a management and safety perspective they may not be appropriate for use adjacent to the motorway.

Response

A Biodiversity Management Plan (BMP) will be developed for the proposed modification, as described in mitigation measure B1 of the Modification Report. The BMP will include rehabilitation methods and management of vegetation, weeds and fauna habitat, as well as erosion and sediment stabilisation, rubbish removal and habitat supplementation. This plan will be developed by a suitably qualified ecologist.

Transport would consider consulting with a bushland regenerator during the development of the BMP. Mitigation measure B9 notes that landscaping will focus on utilising naturally occurring endemic tree and shrub species. Further, mitigation measure LV7 includes undertaking seed collection prior to construction (e.g. within three months of construction contract award, where possible), to source seeds to be used in post-construction rehabilitation, and to otherwise use native and endemic plant species in post-construction rehabilitation.

The Modification Report also includes mitigation measure LV6, to reinstate the 'visual markers' of the creek corridors within the Westlink M7, by:

- Planting of riparian tree species (such as *Melaleuca* and *Casuarina sp*.) on the batters within the central median as they fall towards the lower area at either end of bridges
- Planting of areas under bridges within riparian corridors with indigenous species within the Cumberland Plain Riverflat Forest community, including tall shrubs, grasses and groundcovers
- Investigate opportunities for additional tree plantings.

Opportunities to enhance green infrastructure and tree planting adjacent to noise walls and other areas along the corridor will be investigated during detailed design to mitigate impacts from tree removal along the Westlink M7 median (mitigation measure LV8 in the Modification Report).

As discussed in Section 4.5 of this report, a review of the proposed plant species would be undertaken during detailed design, and during this review Transport will take into consideration comments regarding revegetation using species from a PCT (if present), and the suitability of planting of *Acacia* species.

Advice - Flooding

EHG has reviewed Appendix G Surface Water and Flooding Impact Assessment. From EHG's perspective, the methodology utilised in the FIA prepared by Lyall & Associates appears to follow accepted floodplain risk management practice.

The flood impact assessment is adequately detailed. The consultants have developed a set of flood models including RAFTS and DRAINS hydrologic models for inputs into hydraulic models. TUFLOW hydraulic models have been developed in the vicinity of the project for Cabramatta Creek, Ropes Creek, Eastern Creek, and their relevant tributaries. The models have been utilised to determine existing flooding behaviour and post developed flood behaviour for the full range of flooding.

The assessment identifies potential impacts of the proposed modification on flood behaviour and provides measures for flood mitigation during construction and operation phases. The potential impact of climate change has been addressed. However, EHG provides the following comments regarding validation of the case models:

(1) The FIA utilises Cabramatta Creek Flood Study and Basin Strategy Review (Bewsher Consulting 2010) as the basis for the FIA base case scenario. EHG has previously informed the proponents that Liverpool Council is currently undertaking an update to the 2010 flood study and are willing to provide information to Transport. The base case model should be verified against Council's updated flood study data.

(2) Ropes Creek is part of South Creek Catchment, the base case model should be verified against the Wianamatta South Creek Flood Study existing condition (Revision I).

(3) The FIA utilises hydrological model based on WMAwater 2013 and hydraulic models Catchment Simulation Solution 2014 (CSS) as the basis to their assessment. It should be noted that the hydrology model undertaken by WMAwater has been updated by CSS. EHG is not sure if the updated XP-RAFTS hydrological model has been utilised.

A simple verification exercise at relevant spots/hydraulic structures in the vicinity of the project would be sufficient.

Response

Transport acknowledges that DPE - Environment and Heritage supports the methodology and adequacy of the Surface Water and Flooding Impact Assessment (Appendix G of the Modification Report).

Regarding the validation of the base case models:

- At the commencement of the investigations that were carried out to support the flood impact assessment for the Modification Report, Liverpool City Council (LCC) were contacted to seek any updated flood study data to that presented in the Cabramatta Creek Flood Study and Basin Strategy Review (Bewsher Consulting 2010). The advice from LCC at the time was that the updated study was still underway and that it was expected to be completed sometime in 2022.
- Following the meeting that was held with EHG on 16 June 2022, LCC was contacted again as to the availability of the updated flood study data for use in the flood impact assessment for the Modification Report. LCC advised that the calibration process had been completed and the study would be completed by the end of this year [2022], and that the model would only be made externally available once it is adopted. LCC noted that this may also take some time and so it was recommended to use the current model.

- Updated flood assessments that would be carried out to support the detailed design of the proposed modification would have regard to updated flood study information for the Cabramatta Creek catchment, where this information is available at the time of carrying out the detailed design. As recommended by EHG, communication with EHG would be carried out at detailed design stage so that flood study information can be made available to Transport.
- The extent and resolution of the hydrologic and hydraulic models that have been developed as part of the Wianamatta (South) Creek Catchment Flood Study - Existing Conditions (Revision I) (Advisian, 2022) do not allow for a direct comparison of modelled flood behaviour (either flows or flood levels) in the vicinity of the Westlink M7. This is because the upstream limit of the hydraulic model that was developed as part of Advisian 2022 is located approximately 4.5 kilometres northeast (downstream) of the Westlink M7. It is also noted that the hydrologic model that was developed as part of Advisian 2022 comprises a single sub-catchment to define inflows to the upstream boundary of the hydraulic model at Ropes Creek.
- Advisian 2022 adopted the procedures that are set out in the 1987 edition of Australian Rainfall and Runoff (ARR 1987) (IE Aust, 1987), whereas the hydrologic and hydraulic models that have been developed of the Ropes Creek catchment (Ropes Creek flood models) for the Modification Report are based on the procedures that are set out in the 2019 edition of Australian Rainfall and Runoff (ARR 2019) (Geoscience Australia, 2019). As a result, the parameters adopted in the Ropes Creek flood models are also not directly comparable to those that were developed as part of Advisian 2022.
- It is noted that the modelling approach and parameters adopted for the Ropes Creek flood models are consistent with the models that have been developed to support the detailed design of the M12 Motorway project (M12 Motorway detailed design flood models). The M12 Motorway detailed design flood models were developed in accordance with the Conditions of Approval for that project, which required that the flood modelling was consistent with the procedures set out in ARR 2019 and have regard to the Wianamatta (South) Creek Catchment Flood Study - Existing Conditions (Revision H) (Advisian Worley Group 2020) when validating modelled flood behaviour.
- The XP-RAFTS hydrologic and TUFLOW hydraulic models of the Eastern Creek catchment that were relied upon for the flood impact assessment for the Modification Report were provided by Blacktown City Council (BCC).
- For the purpose of the flood impact assessment for the Modification Report the XP-RAFTS model that was provided by BCC was only used to modify local inflows for those sub-catchments along the Westlink M7 corridor. A check was made to confirm the consistency of the XP-RAFTS model that was provided by BCC with the model boundary files in the TUFLOW model. This check found that peak local flows generated by the XP-RAFTS model were the same or similar to those contained in the model boundary files in the TUFLOW model. On this basis the use of the XP-RAFTS model provided by BCC was considered appropriate for the purposes of the flood impact assessment for the Modification Report.

5.6 NSW Health – Western Sydney Local Health District

Advice – Active Transport

CPH recognises the opportunity the widening of the Westlink M7 offer for additional active transport links that provide a connection across the Westlink M7…Additional connections would enable movements across the Westlink M7 linking neighbourhoods severed by the motorway.

Connections across the Westlink M7 would increase opportunities for people to be active, use active transport for local trips and increase community connectivity. This would provide additional health and wellbeing benefits and help address further the negative health and wellbeing impacts of operation identified in Chapter 7.12; decreasing cardiovascular health, increasing isolation and reducing the sense of community and community cohesion. The current proposal seeks to address these negative health impacts only through reduced congestion.

CPH is aware that Blacktown City Council have identified four points along the Westlink M7 that would provide improved active transport access and connect communities to each other and to the regional open space network:

- Two near Richmond Road connecting the Western Sydney Regional Parklands to the Eastern Creek Corridor and the Northwest Release Areas
- Two at Rooty Hill connecting communities either side of the M7 and enhancing the connectivity of the Great West Walk
- CPH is also aware that additional links to Western Sydney Parklands are needed including:
  - A new link across the M7 from the northern end of Precinct 1 – Nurragingy to the Eastern Creek Corridor, heading up to the Northwest Release Area precincts

  - A connection from the M7 shared path to the Wallgrove precinct, part of which is currently sandwiched between the Great Western Highway and the M4.

- CPH supports the provision of all these active transport connections.

Response

Transport notes the support for the shared user path connections specified. The proposed widening would not preclude additions or upgrades to the shared user path. A response to Blacktown City Council's submission on shared path connections is provided in Section 6.10 (under the heading "Cycleway Connectivity").

There are currently 19 connections from the Westlink M7 shared user path to the local road network within the Blacktown LGA, of which 10 connections provide for east-west movements that link neighbourhoods severed by the motorway. An additional two east-west connections are under construction in the Blacktown LGA which will further enhance community connectivity and encourage the use of active transport.

As per current arrangements, proposals for shared path connections from Western Sydney Parklands can be considered (separately to the proposed modification); these are subject to funding requirements and a road safety audit.

Future Transport (Transport 2022a) commits Transport to develop an Active Transport Strategy, Strategic Cycleway Corridors and regional networks, and invest in walking and cycling infrastructure across the Western Parkland City. Both Western Sydney Parklands and local councils will be involved in this process where relevant. Transport for NSW under the Get NSW Active grants program, encourages Councils to plan ahead, develop a program of works and consider different funding options for proposed projects.

Advice – Health and safety through revegetation measures

CPH commends the consideration of climate change impacts in Chapter 7.14.

CPH support the consideration of opportunities for additional shade for road users who may be exposed to high temperatures for prolonged periods (e.g. breakdown bays), Table 7-109, CC2 Mitigation Measures. CPH recommends that additional shade (natural and/or built shade) also be extended to users of the shared path.

CPH recommend further consideration of the proposal to replace the trees that are to be removed with shrubs. Table 7.10.6 notes that the replacement of trees may not be possible due to maintenance requirements but that there may be opportunities for future tree planting. From a health perspective, replacing trees with trees is preferable to shrubs. Trees provide shade reducing the health impacts of ultraviolet light and heat. Shrubs also offer fewer sight lines, than trees with open trunks. Lack of sight lines can reduce people's perception of safety. It is recommended that the replacement of trees with trees rather than shrubs be considered on a case-by-case basis, with replacement with trees being the preferred outcome. Consultation with Western Sydney Regional Organisation of Councils and Blacktown City Council and their work on Climate Resilient Street Trees is recommended.

Response

The climate change and greenhouse gas impact assessment (Appendix N of the Modification Report) investigated the risk of an increase in paved surfaces exacerbating urban heat island effects, resulting in a cumulative increase in local average temperatures. Whilst the assessment concluded the effect in year 2030 would be unlikely to occur, and minor in impact, mitigation measures to reduce urban heat island effects have been proposed:

- New mitigation measure CC11 - Options to minimise the urban heat island effect will be explored during detailed design (e.g. through vegetation, consideration of materials, surfaces and finishes).

This mitigation measure would help reduce the health impacts of the urban heat island effect, such as those originating from high levels of ultraviolet light and heat.

No major changes to vegetation near the shared user path are proposed. Although, some vegetation would need to be removed from construction ancillary facility sites and at the locations of noise wall construction, which may be near the shared path. Mitigation measure LV8 aims to find opportunity to enhance green infrastructure and tree planting through the areas adjacent to noise walls and other areas along the edges of the corridor to mitigate impacts from tree removal along the Westlink M7 median.

The final selection of landscaping plantings will take several factors into consideration including road, cyclist and pedestrian safety and road design requirements, maintenance requirements, landscape/visual impacts and beneficial impacts such as reduction of heat effects. Additionally, in order to improve the safety of the shared path and increase people's perception of safety whilst using the path, the proposed modification includes a commitment to the consideration of further safety measures during detailed design such as the integration of additional lighting along the path, consistent with Crime Prevention Through Environmental Design principles. Consultation with local councils and the Centre for Population Health Western Sydney Local Health District in relation to health and safety would continue through detailed design for the proposed modification if approved.

6. Response to community submissions

6.1 Proposed modification description/ design

6.1.1 Broader transport network upgrades

Concerns or request for upgrades to the broader transport network surrounding the Westlink M7

Issue description

Submitters raised concerns regarding the broader transport network surrounding the Westlink M7, primarily regarding traffic congestion and queuing on surrounding roads and general transport network connectivity. Specific requests include:

- Incorporate improvements to Fifteenth Avenue West Hoxton, Devonshire Road/Elizabeth Drive intersection, Austral/Kemps Creek intersection and Wallgrove Road/Elizabeth Drive Intersection
- Connect Middleton Drive to Aviation Road underneath or above the Westlink M7 as part of the proposed modification
- Consider a 'mouse hole' type arrangement at the M4 Motorway/Westlink M7 (Lighthorse) Interchange from the M4 Motorway ramp to bypass, such as the project of the M5 Motorway between Heathcote Road and the Hume Highway
- Widen the M5 Motorway/Hume Motorway eastbound at the Westlink M7 junction on-ramp to have four lanes to the Kurrajong Road overpass
- Complete Hannibal Street from Wonderland Drive to Mini Link
- Complete or upgrade Archbold Road including the M4 Motorway bridge eastbound that feeds the industrial estate and Lenore Drive
- Upgrade the M4 Motorway and M5 Motorway
- Consider and plan properly for the housing/property developments occurring in the Western Parkland City
- Reduce the speed limit on Wallgrove Road Horsley Drive Village intersection to 60 kilometres per hour for 500 meters on both sides of the intersection to slow down heavy vehicles.

Response

The proposed modification was developed in line with the identified need for the modification (refer Chapter 3.1 of the Modification Report) and the objectives of the proposed modification, which are to:

- Provide additional capacity on the Westlink M7 to meet future traffic growth, reduce congestion and improve connectivity and reliability
- Avoid and minimise impacts on the road network, the community and environment during construction
- Integrate with the new M12 Motorway, minimising disruption during construction and providing safe and efficient connectivity in the operations phase
- Deliver a design that integrates with and respects the existing urban design and landscape features of the Westlink M7
- Provide a cost effective/ affordable solution

Overall, the proposed modification would improve vehicle speeds for the sections of the Westlink M7 that would be widened and have an additional lane added. However, vehicle speeds for the northern and southern extents outside the proposed widening would experience increased traffic demands, as more vehicles would be attracted to the Westlink M7 with the proposed modification. Although the proposed modification would bring forward the need to consider solutions for these areas to cater for forecast increases in traffic volumes, these issues are mainly associated with population and employment growth rather than the implementation of proposed modification. Solutions to existing and future constraints in the broader road and transport network beyond the proposed modification extents would be investigated during detailed design and in future network optimisation planning and through the requirements of the *Future Transport Strategy* (Transport 2022a).

Planning for broader network upgrades is already underway, such as:

- Elizabeth Drive/ Devonshire Road intersection would be fully upgraded as part of the future Elizabeth Drive upgrade
- Elizabeth Drive/ Wallgrove Road intersection will be upgraded as part of the M12 Motorway construction by 2026. Further information of the M12 at https://roads-waterways.transport.nsw.gov.au/projects/m12-motorway/index.html.

6.1.2 Active transport and shared path

Temporary closures of the Westlink M7 shared path during construction

Issue description

Submitters raised concern about the temporary closure of sections of the Westlink M7 shared path during construction of the proposed modification. They are concerned that the shared path detours, through additional length and alignment, would be a substantial disincentive to active transport users, and have requested that the shared path remain open during construction. Additionally, if detours were to occur, they have requested that any detour provided be of equivalent standard of safety and preferably equivalent "level of service" to the existing route. This should include phasing of traffic signals on these routes and adequate notification and signage.

Response

Construction of the proposed modification would require temporary closures and detours of sections of the existing Westlink M7 shared path, primarily to facilitate access to ancillary facilities and work zones (e.g. for bridge widening works), and to allow access for construction of noise walls. These closures would be critical to ensure the feasibility of constructing the proposed modification and ensure safety of users of the shared path. For example, several bridges are only accessible at local road level from the shared path, and construction traffic would need to traverse these sections of the shared path.

The timing, extent, and duration of closures of the shared path and associated detours would be minimised wherever possible and confirmed once the construction contractor has been appointed and would be influenced by the final construction methodology as well as feedback from stakeholders and local councils. The lengths of the detours would be kept to a minimum and simultaneous closures of separate sections of the shared path would be avoided where possible. The impact of the shared path closures and the respective detours would vary depending on the user, and the extent and duration of the closure. Table 6-13 of the Traffic and Transport Technical Report (Appendix D of the Modification Report) outlines the potential travel distance impacts for various detoured sections of the shared user path. In the case of a detour of the approximately 5.3-kilometre Westlink M7 shared user path between Cowpasture Road and Elizabeth Drive, it is likely that an additional 1300 metres would be added to the cycle route for active transport users. The active transport strategy will aim to maintain a similar level of service where possible.

Shared path detours would be confirmed based on safety factors, practicality and level of service they offer. This process would be similar to how detours are typically identified for other maintenance or upgrade works. Establishment of shared path detours would generally involve placement of signage to redirect pedestrians and cyclists, in addition to community notifications and project website updates. Potential impacts to pedestrian and cyclist access associated with the shared path would be managed by mitigation measures prepared by the construction contractor in consultation with key stakeholders and councils. This includes development of a construction active transport strategy to determine planned shared path detour routes and upgrades to the surrounding shared path/footpath network to safely accommodate detoured shared path users (refer to mitigation measure T4, Chapter 7.1.6 of the Modification Report).

Transport will communicate all closures as early as possible so that community members and stakeholders are aware of closure details. Suitable detours that aim to support active transport will be identified and communicated early. Should the proposed modification be approved, further consultation will take place with the community and key stakeholders (including bicycle user groups) during construction planning and prior to the commencement of construction.

Issue description

Submitters recommended that the shared path is not used for construction traffic as there would be enough disruption to the shared path, and that the construction contractor should be able to find other forms of access.

Response

Construction of the proposed modification would require temporary closures and detours of sections of the existing Westlink M7 shared path, primarily to facilitate access to ancillary facilities and work zones (e.g. for bridge widening works) for construction associated vehicles. These closures would be critical to ensure the feasibility of constructing the proposed modification and provide for the safety of users of the shared path. Transport will ensure that shared path detours will be in place whenever temporary closures occur. Issue description

Submitters requested a list of the construction works that would necessitate the closure of each section of the Westlink M7 shared path and requested confirmation on the proposed detours of the shared path and the timeframes in which the detours would be in place.

Response

The temporary closures and detours of sections of the existing Westlink M7 shared path would be required primarily to facilitate access to ancillary facilities and work zones (e.g. for bridge widening works), and to allow access for construction of noise walls. These closures would be critical to ensure the feasibility of constructing the proposed

modification and would be required for public safety. For example, several bridges are only accessible at local road level from the shared path, and construction traffic would need to traverse these sections of the shared path.

The timing, extent and duration of shared path closures and respective detours would be confirmed once the construction contractor has been appointed and would be influenced by the final construction methodology and feedback from stakeholders and local councils. Transport will communicate all shared path closures and detour routes as early as possible to ensure that the community and stakeholders are aware of closure details. Details of the shared path closures and detours will be included in the Construction Traffic and Access Management Plan and made publicly available.

Upgrades to the Westlink M7 shared path

Issue description

Submitters requested that maintenance, remediation, and upgrade of the existing shared path and adjoining facilities occur, and that this work is undertaken during the periods that the shared path is closed during construction of the proposed modification. They requested that any changes to the shared path must enhance rather than detract from its role as a key active transport corridor for Greater Sydney. Additionally, submitters have proposed specific shared path upgrades they wish to be considered. Specific requests include:

- New shared paths
- Works are undertaken to remediate a flood prone area at the southern end of the shared path, close to Prestons
- Installation and/or upgrades of toilet facilities, bubblers, rest/change areas and E-bike charging stations.

Response

No operational changes, including upgrades, are proposed to the location and overall alignment of the shared path as part of the proposed modification, and the current active travel movements across and adjacent to the Westlink M7 corridor would be maintained. The only exception is at the M4 Motorway interchange where the proposed modification would create a dual lane exit for cyclists only to the M4 Motorway on the northbound carriageway. Currently, cyclists can access the Westlink M7 mainline from the shared path and cross the northbound exit ramp to the M4 Motorway as it is a single-lane exit. This would cease under the proposed modification as it would be unsafe for cyclists to cross two lanes of traffic.

Once construction of the road widening works have completed, all areas of the shared path used for construction of the proposed modification will be restored to their existing condition or a condition that enhances its functionality. This will include remediating any potholes, relining the path, and reinstating any lost vegetation. This maintenance will occur prior to the shared user path re-opening and whilst detours are still in effect.

Transport is committed to investing in active transport for walking and cycling infrastructure. There are currently 66 connections from the Westlink M7 shared path to the local road network. Requests for upgrades, new sections, and additional connections to the shared path from local councils will continue to be managed by WSO Co.

Outside of the proposed modification, Transport is committed to improving active transport through strategic planning, which is being developed independently of the proposed modification, and without ad hoc work associated with the proposed modification. This includes plans under Region and City Plans and Future Transport Strategy, as follows:

Region and City Plans

The Greater Cities Commission features both State and local government perspectives, as well as economic, social and environmental expertise. The Commission has been working closely with Transport and Infrastructure NSW to ensure the upcoming Region Plan and City Plans will align with key principles included in the *Future Transport Strategy* and *State Infrastructure Strategy.* The Commission published the *Greater Cities Commission Six Cities Discussion Paper* in September 2022.

The Region Plan for the new Six Cities Region will be developed by the end of 2023, building on the work of the NSW Government and stakeholders since 2018 when the *Greater Sydney Region Plan, A Metropolis of Three Cities,* was published. In the years that have followed, there have been major shifts in rebalancing infrastructure investment, particularly in Western Sydney within the framework of the Western Sydney City Deal.

The City Plan for the Western Parkland City, along with those for the Eastern Harbour and Central River Cities, will also be developed by the end of 2023, replacing the existing District Plan. The City Plans will be more detailed than the District Plans produced in 2018. They will incorporate and build on the Local Strategic Planning Statements and other work done by local government. In the Western Parkland City, the Blueprint produced by the Western Parkland City Authority will also be a significant input. The Region Plan and City Plans will align with key principles included in the *Future Transport Strategy* and *State Infrastructure Strategy.*

Future Transport Strategy

The Future Transport Strategy (Transport, 2022a) commits Transport to develop an Active Transport Strategy to guide communities, councils, and industry plans and investment in walking and cycling infrastructure across the state. Strategic Cycleway Corridors will also be developed for each of the six cities, along with regional networks. The first of these is the Eastern Harbour City Strategic Cycleway Program, released in April 2022, which provides the foundation for safe and convenient cross-city cycleways that better connect centres, precincts and places, while supporting councils to progressively expand local bike networks. This Program identifies 30 strategic cycleway corridors making up approximately 250 kilometres of network. Similar programs will follow for the other five cities, including the Western Parkland City. The identified Cycleway Corridors will be developed in sections to progressively expand the connected network. Transport will continue to work with councils and partners to progress these immediate opportunities as well as expanding the program to include other corridors within the strategic network.

Transport under the 'Get NSW Active' grants program, encourages councils to plan ahead, develop a program of works, and consider different funding options for proposed projects. The strategic objectives of the Get NSW Active program are aimed at:

- Improving bike riding to and within centres, neighbourhoods and to key destinations
- Improving walkability in centres, neighbourhoods and at key destinations, and
- Enabling vibrant centres and liveable neighbourhoods through the creation of street environments that prioritise walking and cycling.

This approach enables Transport to progressively plan and expand networks and support councils to develop a sustainable forward program of walking and cycling projects that provides tangible benefits for our communities and customers. Incremental improvement will not achieve benefits at the scale envisaged in this strategic plan. This will require a significant change in the approach to both strategic planning and delivery, including mobilising all levels of government and all departments of State Government.

In regard to the flood prone area at the southern end of the shared path, close to Prestons, options solutions to improve the flood immunity of the shared path will be investigated during detailed design.

The addition of other facilities, such as toilets and additional water bubblers, along the existing Westlink M7 shared path are not being considered as part of the modification.

Prohibition of cyclists on the Westlink M7 during operation of the proposed modification

Issue description

Submitters raised concern about the permanent prohibition of cyclists on the Westlink M7 between the M5 Motorway and Richmond Road. A submitter shared concerns that the shared path is inappropriate and dangerous for advanced road cyclists and those wishing to train for fitness. The submitter requested that the active transport infrastructure align with *the Cycling Aspects of Austroads Guides (2017)*, in particular Section 2.4.5 and Section 2.7.

Response

The decision to prohibit cycling on the Westlink M7 mainline between the M5 Motorway and Richmond Road was made to address potential safety risks to cyclists associated with inadequate lighting in the area at night and travelling with high-speed vehicular traffic on the motorway, which has resulted in past fatal and critical cycling incidents. Instead, cyclists would be able to travel on the shared path that runs parallel to the Westlink M7. Similarly for example, upon the implementation of the M4 Smart Motorway system, cyclists would no longer be allowed on the M4 Motorway mainline. The proposed modification would also create a dual lane exit to the M4 Motorway on the northbound carriageway, preventing cyclists crossing at this location, which is considered an unacceptable cyclist safety risk. The Westlink M7 shared path wayfinding signage has already had all reference to access onto the M4 removed.

Modified traffic conditions during the construction phase of the proposed modification would also pose major safety risks due to interaction with heavy vehicles and disrupted traffic.

The removal of cyclists from the mainline is consistent with road safety best practice and addressing the inherent safety risks in allowing cyclists to travel alongside high-speed traffic travelling at 100 kilometres per hour. Specifically, risks associated with allowing cyclists to travel alongside high-speed traffic on the Westlink M7 include the following:

- Drivers are expected to provide a 1.5 metre distance when passing cyclists, which introduces the risk of sideswipes with traffic in adjacent lanes
- Any collision with cyclists at this speed, such as through an inattentive driver, would likely result in fatal injuries to the cyclist

- 51 per cent of crashes on the Westlink M7 in the 2017-18 period involved a heavy vehicle, indicative of the high proportion of heavy vehicles of this portion of the road network. Heavy vehicles have reduced visibility in front and to the side of the vehicle, making it difficult for a driver to observe and safely pass a cyclist. In addition, heavy vehicles combinations would commonly sway within their lane, creating a risk of a cyclist being sideswiped.

Further, cycle counts were undertaken on the Westlink M7 mainline for the traffic and transport impact assessment (refer Section 7.1 of the Modification Report) to estimate the number cyclists that would be diverted to the shared path. The cycle counts were undertaken across nine days in June 2022 at three sections along the Westlink M7:

- Between Richmond Road and Power Street
- Between the M4 Motorway and Old Wallgrove Road
- Between Elizabeth Drive and Cowpasture Road.

Fewer than 20 cyclists per day were counted across all sections per day, with no clear difference between weekdays and weekends. It was noted that these numbers were possibly lower than average as they were taken in winter. Higher numbers of cyclists may use the mainline per day at times; however, the number of cyclists expected to be diverted to the shared path daily is relatively low.

The shared path is connected with the local road network (currently with 66 connections), is separated from road traffic and allows users to enjoy an uninterrupted trip for nearly 40 kilometres, and is illuminated 24/7, providing a safe alternative route to cyclists.

The proposed modification would also not preclude the development of additional active travel infrastructure or further active travel connections in future.

6.1.3 Tolls

Cost or management of tolls

Issue description

Submitters requested that the cost of tolls along the Westlink M7 are either not increased, reduced or eliminated, or that otherwise they should be handed over to control of the State Government.

Response

On the M7, motorists pay based on the distanced travel with trips capped once 20 kilometres has been travelled. These rates escalate or de-escalate with the consumer price index each quarter.

A range of options for funding the project are being investigated and will be confirmed once costs are ascertained through a procurement process for delivery of the project.

6.1.4 Maintenance and repairs

Maintenance during operation of the proposed modification

Issue description

A submitter requested that consideration be made regarding the ongoing maintenance of the Westlink M7, in particular the integration of safety measures in design for technicians and measures negating the need to perform speed reductions when motorway maintenance is occurring. Specific measures mentioned in the submission include integrating access gangways into the gantry and placing electronic assets behind jersey barriers.

Response

The design of the proposed modification considers future maintenance strategies that prioritise the safety of workers undertaking any maintenance. The Westlink M7 Operations Management and Control System would be updated to reflect the operational changes to the Westlink M7, including new traffic loops to cover the new lanes. Other operational ancillary facilities would generally be reinstated in their existing arrangements following the construction period. There would also be intelligent transport systems (ITS) installations to cover the new lane configurations, including toll gantry adjustments, relocation of variable speed limit signs (VSLS) and variable message signs (VMS). Recommendations made in submissions to improve the efficiency and safety of the motorway would be taken into account when developing the detailed design of the proposed modification.

6.1.5 Smart technology

Integration of smart technology

Issue description

Submitters request that smart technology and other measures are put in place to control traffic flow and speeds.

Response

The Westlink M7 is already a smart-managed motorway; the procedural use of existing and future Intelligent Transportation System (ITS) devices, such as variable speed limit signs, variable message signs, vehicle detection loops and the use of traffic cameras and a motorway operation complex would continue to be used to control traffic flow and speeds and would be extended to the widened roadway. Smart technology is already (and will continue) to be used to control traffic flow, speeds, and the integration of technology for performing maintenance on the corridor.

6.1.6 Support for the proposed modification

Stated support for the proposed modification

Issue description

Submitters stated support for the proposed modification.

Response

Support for the proposed modification is noted.

6.2 Need for the modification and strategic context

6.2.1 Strategic context

The proposed modification is not strategically compatible with local state or federal policies/ plans

Issue description

Submitters requested that the proposed modification align its active transport elements to current Transport for NSW movement and place frameworks and policies such as the *Providing for Walking and Cycling in Transport Projects Policy 2021* and the *Future Transport Strategy 2056*. They have concerns that suppressing active transport over the years of construction will have a long-term impact on the ability of Western Sydney residents to develop sustainable, healthy travel habits.

Response

The modification is being proposed to enable the widening of part of the Westlink M7 in response to current and projected future traffic growth, to address reduced motorway efficiency and enhance safety. The proposed modification does not include changes to the existing shared user path that runs parallel to the Westlink M7.

Consistent with the *Providing for Walking and Cycling in Transport Projects Policy* (Transport for NSW, 2021b) and the *Future Transport Strategy* (Transport for NSW, 2022a), the provision and maintenance of active transport infrastructure along its length is a core aspect of the Westlink M7. The proposed modification would maintain these existing active transport facilities during operation and would not permanently impact/change public or active transport journey times. Transport's broader plans under the Future Transport Strategy and other policy documents is explained further in Section 6.1.2.

Temporary closures and detours of sections of the shared path would be required to enable construction of the proposed modification and allow construction vehicles to access a number of bridges. A shared path, modified and detoured in some locations temporarily, would continue to be provided for, for the length of the Westlink M7, throughout the duration of the construction works. An active transport strategy will be developed to document planned shared path detours during construction and consider modifications to existing facilities within the surrounding shared path/footpath network that will safely accommodate Westlink M7 shared path and mainline cyclists. The active transport strategy will be developed in consultation with local councils and bicycle user groups. The existing shared path alignment and condition will be reinstated and fully operational at the completion of construction.

Detour routes would be confirmed based on safety and adequacy/level of service they provide, whilst aiming to minimise impacts to users, and would be confirmed in consultation with relevant stakeholders. Whilst the detoured routes may be longer, as the best and most efficient routes were selected for the existing shared use path, they are considered appropriate for the use they currently receive. Finalisation of detour routes will be undertaken during detailed design and will be subject to consultation with councils.

Due to potential safety risks to cyclists, restrictions would be introduced during construction of the proposed widening that would prohibit cycling on the Westlink M7 mainline between the M5 Motorway and Richmond Road. This restriction would continue during operation of this section of the Westlink M7, and due to the creation of a dual lane exit to the M4 Motorway on the northbound carriageway, would also prevent cyclists from crossing at this location. The prohibition of cyclists on the mainline is in accordance with current safety standards on motorways. During the cycle counts in June 2022, it was noted that fewer than 20 cyclists utilised the mainline per day. The limited number of cyclists who utilise the mainline of the Westlink M7 would instead need to use the existing shared path or alternative routes across the surrounding road network.

6.3 Options and alternatives

6.3.1 Approved project

The original approved Westlink M7 project should have included the currently proposed additional lanes

Issue description

Submitters believe the proposed modification (i.e. incorporation of three lanes each way) should have been part of the original Westlink M7 design and construction.

Response

The original Westlink M7 (i.e. the approved project) provided for two lanes in each direction, which was based on the projected need at the time, traffic modelling undertaken, cost effectiveness (including minimising property acquisition), and acceptable levels of impact. The traffic modelling undertaken for the Environmental Impact Statement (EIS) (Roads and Traffic Authority, 2000) indicated that two lanes in each direction would be sufficient in the medium to long term. Furthermore, during the original design development of the Westlink M7, the traffic assessment undertaken at the time did not show traffic demand levels that warranted the additional lanes to be implemented within ten years of the opening of the project, which were based off projections for 2016. The option for additional lanes in the future was provided through the provision of the wide central median, which was planned to be based on future demand, need and funding.

Over the years, the Westlink M7 has become a key transport route for Greater Sydney and due to population growth and development in the area, it now regularly experiences congestion. Increasing the road capacity of the Westlink M7 through the delivery of the proposed modification would address current and projected congestion issues and enhance safety. The space available in the median would increase the road capacity enabling faster and more reliable connections between Sydney's south-west and north-west, enable better and more reliable trips for people, businesses, and freight and improve journey times to planned growth areas and the new Western Sydney International Airport.

6.3.2 Alternatives and options assessment process

The proposed additional lanes should be used for public transport

Issue description

Submitters request to use the central median/ proposed additional two lanes for integrated public transport services, with some referencing Transport's *Future Transport Strategy 2056*.

Response

The original design and construction of the Westlink M7 provided a wide centre median which could be used for either additional traffic lanes or public transport facilities in the future. Existing strategies, such as the *Future Transport Strategy* (recently updated, Transport for NSW, 2022a) and *NSW Freight and Ports Plan 2018–2023*, have not identified the need for the median of the Westlink M7 as a public transport corridor. Alleviating capacity constraints on Greater Sydney's road network and the public transport system through the provision of public transport infrastructure has moved away from the Westlink M7. Instead, increasing the road capacity of this key north-south motorway, in conjunction with the development of the network of public transport infrastructure projects in Greater Sydney and western Sydney in particular, would support the objectives of the strategic metropolitan and transport documents shaping Greater Sydney's growth. As such, it was prompted that the space within the median strip would be used for additional traffic lanes. The design of the proposed modification would not preclude use of the motorway for public transport (e.g. on the new traffic lanes) in the future should there be a change to strategic transport policies. Further information can be found in Section 3 (Strategic Context) of the Modification Report.

Adequacy of the options and alternatives assessment, and subsequent design chosen

Issue description

Submitters question the adequacy of the alternatives and options assessment process undertaken for the proposed modification. Specifically, they are concerned that the design does not provide sufficient traffic lanes in each direction, and the general road design does not take future population growth and vehicular growth into consideration (including 'induced demand'). They also questioned how long the additional lanes proposed would be able to manage congestion.

Response

The scope of the proposed modification is driven by the proposal's need which is to provide additional capacity on the Westlink M7 to meet future predicted traffic growth, reduce congestion and improve connectivity and reliability.

Detailed traffic investigation and modelling was carried out to understand the future demands of population growth and traffic growth along the Westlink M7. The road network assessment and modelling was informed by the latest land use and population data and potential future road network changes; it considered the year of opening (2026) and 10 years post-opening (2036).

As detailed in Section 7.1 (Traffic and transport) of the Modification Report, the traffic modelling undertaken found that with the proposed modification, the network performance of the Westlink M7 and wider road network would substantially improve in both 2026 and 2036 based on the following findings:

- Vehicle kilometres travelled would increase by approximately 11 per cent and 13 per cent in 2026 and 2036, respectively
- The total serviced demand would increase by approximately 23,500 and 31,700 vehicles (10 and 12 per cent) in 2026 and 2036, respectively
- Vehicle hours travelled would decrease by approximately 2,000 and 9,000 hours (5 and 15 per cent) in 2026 and 2036, respectively. This suggests that vehicles would spend significantly less time on the network with the proposed modification
- The average mean speed would increase by 8 and 16 kilometres per hour (11 and 28 per cent) in 2026 and 2036, respectively
- The network density would decrease by 3 and 5 vehicles per kilometre (22 and 30 per cent) in 2026 and 2036, respectively
- The total number of stops would decrease by approximately 98,000 and 207,000 (55 and 54 per cent) in 2026 and 2036, respectively. This suggests that traffic conditions would be less stop-start with the proposed modification.

Based on the above, the additional capacity that the proposed modification would offer would substantially improve the overall network performance of the Westlink M7 corridor. In comparison, without the proposed modification, the Westlink M7 would progressively get more congested in 2026 and 2036 due to background traffic growth. The average speed would decrease from 70 kilometres per hour in 2021 to less than 60 kilometres per hour in 2036. Similarly, the total number of stops would increase from nearly 170,000 in 2021 to around 380,000 stops in 2036.

The traffic assessment indicated that in future years (Years 2026 and 2036) traffic volumes would not reach levels where further additional lanes other that what is currently proposed would be necessary, and the current proposed modification would meet predicted traffic and population demands.

Transport will investigate solutions for the areas where there would be declines in LoS during detailed design in accordance with mitigation measure T6. Local councils will be consulted during the development of improvements, which would be part of the network optimisation plan and subject to separate approval processes.

Adequacy of the design chosen for the proposed modification

Issue description

Submitters question the ability of the design of the proposed modification and its elements, including entry/exit ramps, interchanges, and road design, to meet the needs of current and future road users. They have raised concerns about the design to adequately address safety, traffic/congestion, and general functionality issues. Submitters have made suggestions they wish to be considered in the proposed modification design.

Specific requests include:

- Install a dedicated exit lane to the start of the M4 Motorway before the Old Wallgrove Road interchange and run parallel to the Westlink M7 on the western side of the Old Wallgrove Road on-ramp
- Install a new on-ramp connection which could be built on the northern side of the M4 Motorway connecting with the existing M4 eastbound exit for vehicles exiting the M4 Motorway to travel north on the Westlink M7
- Continue a dedicated lane from the M4 Motorway ramps along and merge with the on-ramp at Old Wallgrove Road making that the primary ramp with two lanes entering the Westlink M7
- Create dual lanes exiting the M4 Motorway southbound onto the Westlink M7 rather than a single lane
- Extend the acceleration on the on-ramp lane to allow heavy vehicles to merge at safer speeds
- Install a fourth dedicated ‘Truck Only Lane’ along the northbound lane, between the shared path overbridge north of Cowpasture to Elizabeth Drive to future proof growth, particularly as the junction with the M12 Motorway is joining at the base of this hill
- Add an extra breakdown bay halfway up the hill along the northbound lane, between the shared path overbridge north of Cowpasture to Elizabeth Drive
- Include two dedicated lanes from the Hume Motorway/Camden Valley Way to the toll gantry
- Extend the current lane one, which terminates from a ramp to past the toll gantry (near the Westlink M7 on-ramp northbound from Hume Motorway to toll gantry)
- Extend the existing acceleration lane from the Westlink M7 on the Hume Motorway to the Kurrajong Road overpass

- Install an overpass exit at the exit feeding Richmond Road as the existing exit feeding Rooty Hill Road north causes a backup of traffic in the surrounding local network
- Include a merge lane for traffic efficiency. An alternate is to remove stopping bays and provide a single rest area with space for multiple vehicles in either direction (15-20 spaces)
- More entry and exit points at Middleton Grange.

Response

The scope and design of the proposed modification was developed in line with the need for the proposed modification and objectives (refer Chapter 3 of the Modification Report). Strategic alternatives and various design and construction options were considered and assessed against the objectives of the proposed widening. Opportunities to reduce potential adverse social and environmental impacts of the proposed widening were investigated, in addition to the key objective of improving the efficiency and reliability of travelling on the Westlink M7.

Future road user demand along the Westlink M7 due to future population growth and key developments such as the Western Sydney Airport is forecast to result in:

- Vehicle kilometres travelled increasing on current levels by approximately 11 per cent and 13 per cent in 2026 and 2036, respectively
- The total serviced demand increasing on current levels by approximately 23,500 and 31,700 vehicles (10 and 12 per cent) in 2026 and 2036, respectively.

Based on the above, the additional capacity of the proposed modification would substantially improve the general network performance of the Westlink M7 corridor and would improve vehicle speeds for the sections of the Westlink M7 that would be widened.

In response to the specific requests for inclusion in the design of the proposed modification:

- *Acceleration on ramps*: The constraints associated with the short distance between the entry and exit ramps to the M4 Motorway and Old Wallgrove Road are discussed in section 3.3.3 of the Modification Report. As noted, whilst the proposed design does not remove the short distance between the interchanges or the inherent weaving movements which will need to occur, it would provide capacity and operational improvements compared to the current configuration. Options to eliminate the interactions between entry and exit ramp movements, including through grade separation, would be cost prohibitive and also result in restriction of access for those entering from Old Wallgrove Road to the M4 Motorway
- Analysis of anticipated traffic demands for the northbound exit from the Westlink M7 would exceed the capacity of a single lane into the future and hence a two-lane northbound exit to the M4 Motorway has been included in the design to facilitate the expected growth. This analysis did not identify the need for dual lanes exiting the M4 southbound onto the Westlink M7
- *A fourth dedicated 'Truck Only Lane:*' Provision of a fourth dedicated climbing lane would require shoulder widening. As noted above, an initial options assessment was undertaken to compare widening into the centre median of the Westlink M7 against widening onto the shoulder of the Westlink M7, both of which would be necessary if an additional "Truck Only Lane" were included in the design. This assessment found greater social, environmental, and cost implications from shoulder widening than widening into the centre median of the Westlink M7. The preferred design is expected to provide sufficient capacity without these additional impacts. The provision of a third lane whilst maintaining the 2.5 metre shoulder would greatly improve the resilience of the motorway in the event of breakdowns
- *Extra breakdown bay*: The provision of a third lane whilst maintaining the 2.5 metre shoulder would greatly improve the resilience of the motorway in the event of breakdowns
- *Extend the existing acceleration lane from the Westlink M7 on the Hume Motorway to the Kurrajong Road overpass*: As noted in section 7.1.5 of the traffic report, the modelled performance of the Camden Valley Way/M7/M5 interface would perform at an unsatisfactory level of service with or without the proposed M7 Widening. works. The M31 comprises a four-lane northbound carriageway feeding Westlink M7 and the M5 Southwest (two lanes to each), and a four-lane southbound carriageway (narrowing to three-lane immediately prior to Campbelltown Road) receiving traffic from M7 and M5 (two-lanes from each). Analysis of the current operating conditions of these sections reveals that the northbound performance can be impacted by the M5 Southwest AM-peak congestion in the eastbound direction, whilst the southbound carriageway is increasingly approaching the capacity of its three-lane section prior to Campbelltown Road entry ramp during the PM peak.

Having regard for these constraints, it was deemed that in the absence of broader network enhancements the proposed design for M7 Motorway widening was the appropriate configuration.

6.4 Consultation

6.4.1 Consultation and inclusion

Bicycle interest group consultation

Issue description

Bicycle interest groups requested to be consulted on their area of concern, as follows:

- CAMWEST and Bike North would like to be involved with the development of the active transport strategy
- Bike North would like to be consulted during the detailed design process to discuss the need for the proposed detours and allow suggestions for alternative strategies
- Bicycle NSW request that they are consulted on how to avoid or at least minimise detours.

Response

Transport will inform the community and stakeholders when a decision has been made regarding approval of the proposed modification by DPE. Should the proposed modification be approved, further consultation would take place on the Westlink M7 active transport strategy during construction planning and prior to commencement of construction with stakeholders including bicycle interest groups, which would document planned shared path detours and upgrades to the surrounding shared path/footpath network to safely accommodate shared path users.

6.5 Traffic and transport

6.5.1 Construction impacts

Construction traffic impacts

Issue description

Submitters raised concerns regarding traffic and transport impacts during the construction phase. For instance, as the traffic is heavily congested on the existing road, this will worsen during construction. In addition, one submitter stated that there were already many Heavy Goods Vehicles (HGVs) using the local roads, and this number would increase during construction of the proposed modification, increasing congestion and creating a greater safety risk.

Response

A traffic and transport assessment were undertaken for the proposed modification, which is provided in Appendix D and summarised in Section 7.1 of the Modification Report. The main potential adverse traffic and transport impacts during construction would include:

- Temporary road network changes, which consist of, but are not limited to:
  - Reductions in speed limits along the construction footprint (e.g. from 100 kilometres per hour to 80 kilometres per hours)
  - Temporary road and/or lane closures on the Westlink M7 and surrounding road network
  - Temporary traffic diversions ranging from 300 metres to 2.8 kilometres of additional travel distance with off-motorway detours or contraflow arrangements.

Existing traffic volumes and expected construction traffic volumes along the Westlink M7 are expected to increase by up to two percent per day or between one and three percent during the peak hours. These traffic volume increases are minor.

On local and regional roads in the surrounding road network, Wilson Road, Aviation Road and Blackbird Close would experience the greatest impacts. However, Aviation Road and Blackbird Close are in an industrial area and therefore minimal impacts on the operation and safety of these roads is expected. Wilson Road provides local access between Hoxton Park Road and the local residential area in Hinchinbrook. No residential properties have frontages to the southern section of Wilson Road which is planned to be used for access to/from the construction ancillary facility, however several community facilities do. Therefore, use of Wilson Road should be coordinated to minimise concurrent timing with large gatherings that may occur at adjacent land-uses. The operation and safety of the remaining local and regional roads are expected to be minimally impacted.

Construction activities at the ancillary facilities accessed via residential streets would be minimised as much as practical to limit adverse impacts on the adjacent residents.

Traffic volumes on State roads could increase by up to six percent per day due to construction traffic accessing ancillary facilities. For most locations, this would be expected to have minimal impact on the operation and safety of these roads given the existing traffic volumes and road network conditions. However, peak hourly traffic volumes on Wallgrove Road and Elizabeth Drive could increase by up to 18 and seven percent per hour, respectively. This is

considered a more significant traffic volume increase which would likely result in increased peak period congestion and travel times along these roads.

The primary environmental management tool to address these construction impacts will be the CEMP, which will be prepared by the construction contractor prior to construction. The CEMP will contain a Construction Traffic and Access Management Plan containing site-specific plans and controls for works areas across the construction footprint. These plans will outline the guidelines, general requirements, and specific procedures for how construction works are to be delivered to limit the impact on traffic and transport operation in the area. Additional mitigation and management measures that would reduce the construction impacts on traffic and transport are located in Section 7.1.6 of the modification report.

Subject to approval and prior to construction commencing for the proposed modification, Transport would notify and consult with the community and key stakeholders on the proposed construction timeframes and construction activities. Consultation would continue throughout the construction period. Refer to Chapter 6 of the Modification Report and Section 2 of this report for further information on consultation.

6.5.2 Operational impact

Operational traffic impacts

Issue description

Submitters are concerned about an increased risk of road accidents due to the additional lanes that would be introduced by the proposed modification.

Response

Road safety is considered in the traffic and transport assessment prepared for the proposed modification (refer Appendix D of the Modification Report). The assessment notes that without an increase in the existing capacity of the Westlink M7, and with the predicted continued growth in traffic demand, density, and congestion along the corridor, the frequency of accidents on the Westlink M7 would be expected to also increase. In congested conditions, drivers can become frustrated as their ability to travel at their desired speed is impaired; often more risks are taken, and crashes occur more frequently as a result. Driving consistent speeds, is also considered to be safer for road users, rather than stop-start traffic conditions. The proposed modification would generally lead to increased vehicle speeds and less congestion along the Westlink M7 than is currently experienced, and therefore it is expected that the crash rates would decrease with the proposed modification. Speed limits will continue to be enforced on the Westlink M7 during the operation of the proposed modification and speeding will be discouraged.

6.6 Noise and vibration

6.6.1 Construction impacts

Issue description

Submitters raised concerns regarding noise and vibration impacts during the construction phase of the proposed modification. In particular, there was a request for the installation of noise walls prior to construction.

Response

A noise and vibration assessment were undertaken for the proposed modification and is provided in Appendix E and summarised in Chapter 7.2 of the Modification Report.

During construction, a variety of proposed activities and equipment used would have the potential to adversely affect local noise and vibration levels, including in relation to extensive nighttime works that would be required. The main findings of the noise and vibration impact assessment for the construction phase are outlined below:

- All construction stages had the potential to affect residential receivers by producing noise levels above applicable noise management levels
- 15 out of 34 noise catchment areas (NCAs) would be ‘highly affected’ by certain activities at some point during construction
- Receivers close to the proposed new noise walls would experience noise levels above the applicable noise management levels during the installation of the noise walls
- Road traffic noise from detoured motorway traffic along proposed detour routes during construction would increase by more than two decibels (dB), in some places.
- Cumulative construction impacts may increase the number of receivers that experience excessive noise levels
- Construction vibration may be generated by vibration intensive equipment proposed to be used at various stages during construction

- For construction traffic (e.g. heavy vehicles) to generate an increase in noise levels of greater than 2 dB, existing traffic levels along construction traffic routes would need to increase by around 60%. No increases in road traffic noise of greater than 2 dB(A) have been identified at any of the proposed construction access roads, and therefore local receivers would not be significantly impacted by heavy vehicle construction traffic.

A Construction Noise and Vibration Management Plan (CNVMP), which forms part of the CEMP, will be prepared to mitigate and manage noise and vibration impacts during construction (mitigation measure NV1).

The implementation of construction noise and vibration management measures will be based on the existing land use and the *Noise Mitigation Guideline* (NMG) (RMS 2015b). Construction environmental management measures are provided in Appendix B of this Submissions Report. Mitigation measures NV1 to Nv16 relate to construction noise and vibration and include measures including but not limited to:

- Scheduling noisy work to be undertaken during the standard hours as far as possible. Noisy activities that cannot be undertaken during standard construction hours are to be scheduled as early as possible during the evening and/or night-time periods
- Particularly noisy activities such as the use of impact piling rigs, road and concrete saws, rock hammers, should be scheduled where feasible and reasonable around times of high background noise to provide masking
- Deliveries will be carried out during standard construction hours where feasible and reasonable
- Where properties have been identified for architectural treatment and these properties will be impacted by noise from construction works, Transport will consult with those property owners on the early installation of treatments to provide noise mitigation during the construction of the proposed modification. This approach will assist in managing noise through all phases of the proposed modification
- The noise associated with the operation of construction ancillary facilities will primarily result from the operation of fixed and mobile plant and truck movements. Consideration will be given to the layout of the site to maximise distance and shielding to nearby receivers:
  - Alternative works methods such as use of hydraulic or electric-controlled units in place of diesel units will be considered and implemented where feasible and reasonable. The use of alternative machines that perform the same function (such as rubber wheeled plant) will be considered in place of steel tracked plant. Equipment will be regularly inspected and maintained to ensure it is in good working order.
  - Plant should be located on site with as much distance as possible between the plant and noise sensitive receivers. Noisy equipment will be orientated away from residential receivers where feasible and reasonable
- If the use of vibration intensive plant cannot be avoided within the minimum working distance for cosmetic damage the following procedure will occur as a minimum:
  - Notification of the works to the affected residents and community
  - Works will not proceed until attended vibration measurements are undertaken. Vibration monitors are to provide real-time notification of exceedances of levels approaching cosmetic damage criteria
  - If ongoing works are required, a temporary relocatable vibration monitoring system will be installed, to warn operators (via flashing light, audible alarm, short message service (SMS) etc) when vibration levels are approaching the cosmetic damage objective.

Ongoing consultation will continue with affected landholders in accordance with a Community and Stakeholder Engagement Plan that will be prepared for the proposed modification to manage impacts during construction (mitigation measure SE1).

Consistent with the Conditions of Approval for the approved project, Transport will consider the use of a range of structural and non-structural measures during construction including barriers, acoustic treatment of residences, scheduling of construction activities to minimise impacts and temporary relocation of significantly affected residents.

6.6.2 Operational impacts

Issue description

Submitters are concerned about increased noise emissions in their area due to the proposed modification. Submitters have requested noise walls to be installed in particular areas adjacent to the Westlink M7 or have requested individual noise impact assessment studies be performed at their properties.

Response

A noise and vibration assessment were undertaken for the proposed modification, which is provided in Appendix E and summarised in Section 7.2 of the Modification Report. The assessment found that noise impacts associated with the operation of the proposed modification are predicted to exceed applicable noise criteria and would generally occur at receivers directly adjacent to the Westlink M7 corridor. The majority of these exceedances of the

acute noise limit, however, are generated by existing high noise levels from the operation of the existing Westlink M7.

Appropriate noise mitigation will be applied to minimise adverse impacts on the community by the project, in accordance with the *Noise Mitigation Guideline* (RMS, 2015b) and the draft *At-Receiver Noise Treatment Guideline*.

Noise mitigation in the form of noise walls or noise wall adjustments, and architectural treatments have been considered. Adjustments to existing noise walls and addition of new noise walls are proposed at several locations (refer Section 7.2.5 of the Modification Report).

A sensitive receiver is considered eligible for the consideration of noise mitigation where:

- The predicted design noise level exceeds the Noise Criteria Guideline controlling criterion and the noise level increase due to the proposal (i.e. the noise predictions for the 'Design' minus the 'Do Minimum') is greater than 2.0 dB(A), or
- The predicted 'Design' noise level is 5 dB(A) or more above the criteria (exceeds the cumulative limit) and the receiver is significantly influenced by road noise, regardless of the incremental impact of the proposal, or
- The noise level contribution from the road proposal is acute (daytime LAeq(15 hr) 65 dB(A) or higher, or night-time LAeq(9 hr) 60 dB(A) or higher) then it qualifies for consideration of noise mitigation even if noise levels are dominated by another road.

There were 329 noise sensitive receivers, and seven schools, seven places of worship and one childcare centre considered to be eligible for the consideration of feasible and reasonable noise mitigation measures (e.g. at-receiver architectural acoustic treatment). With the implementation of the noise walls assessed this was reduced to 250 sensitive receivers. The requirement for and provision of at-receiver acoustic treatment would be confirmed at detailed design of the proposed modification (e.g. where more specific information would be available that may change the noise modelling outcomes).

Further, operational traffic noise will be monitored at sensitive receivers between six months and one year after opening to identify whether additional feasible and reasonable mitigation measures are required (mitigation measure NV18).

The mitigation measures proposed in the Modification Report are considered to be sufficient measures to avoid, mitigate and/or minimise any significant noise and vibration impacts to the local community.

6.7 Air quality

6.7.1 Operation impacts

Operational air quality impacts

Issue description

Submitters are concerned about reduction in air quality due to operation of the proposed modification.

Response

Operational air quality impacts are assessed in Appendix F of the Modification Report and summarised in Chapter 7.3 of the Modification Report. The assessment found that there is potential for negligible to small increases in pollutant concentrations for some sensitive receivers surrounding the proposed modification; however, the general impact across the airshed would be expected to be broadly balanced with some areas experiencing decreases in pollutant concentration.

Specifically, the air quality assessment compared modelled future scenarios (2026 and 2036) with and without the proposed modification, finding that the scenario with the proposed modification had generally slightly higher ground level concentrations for all pollutant concentrations (NO2, CO and particulates (PM10 and PM2.5)). The highest differences were observed in the northern domain assessed, particularly near urban residential premises in Oakhurst and Glendenning. These differences between with and without the proposed modification would be relatively minor as a percentage change against the relevant EPA criteria. Regardless of the potential slight differences in pollutant concentrations in 2026 and 2036 due to the proposed modification, all future scenarios (i.e. 2026 and 2036 scenarios both with and without the proposed modification) have lower predicted ground level concentrations at sensitive receptors for all pollutants when compared to existing operations. This is due to anticipated general societal changes in vehicle fleets, with expected future increases in the uptake in vehicles with more stringent emission standards, and reduced number of aging vehicles with lower emission standards on the Sydney road network.

The potential health risk associated with the proposed modification (2026 and 2036) in relation to annual average PM2.5 was assessed to be negligible to acceptable. Within the study area, most ground level annual average PM2.5 values would be within the negligible risk category; with higher annual PM2.5 values closer to the kerb of the Westlink M7 classified as acceptable risk.

Some smaller areas close to the road corridor fall within the tolerable risk category. There are no sensitive receptors across either of the scenarios with an annual PM2.5 value within the unacceptable risk category.

Of the volatile organic compounds (VOCs) assessed, when comparing 2026 and 2036 with and without the proposed modification, changes in contribution of predicted 1-hour 99.9th percentile benzene and formaldehyde concentrations indicate there is no significant difference in predicted ground level VOC or total PAH concentrations at sensitive receptors. Predicted changes across all scenarios in contribution for both benzene and formaldehyde were found to be less than one percent.

When comparing existing operations with future scenarios (with and without the proposed modification), potential decreases of VOC and PAH concentrations at sensitive receptors were observed. These changes are attributed to anticipated changes in vehicle fleets, more stringent emission standards and reduced number of aging vehicles on the road network, as mentioned above.

6.8 Liverpool City Council

This section provides an overview of the comments made by Liverpool City Council. A copy of the full submission is provided in Appendix C.

Traffic and transport – Cycling paths

Issue description

Council supports the proposed modification subject to the comments in this letter being incorporated into the proposed modification. … Middleton Grange is west of the Westlink M7 and has an existing at-grade cycleway along the Westlink M7. Council is proposing to construct a second access road, as an extension of Middleton Drive, to Aviation Road which would necessitate adjustments to the shared pathway. Transport for NSW has requested that for the road extension, the existing at-grade cycleway is to be grade separated.

Council request that the scope of the proposed modification be increased to include grade separation of the at-grade cycleway. Council has completed the strategic concept design for the Middleton Drive Extension including for the associated grade separated cycleway and can provide the design to be incorporated into the proposed modification design and delivery. Council notes that Middleton Drive is a local road and would enter into an agreement with Transport and the Westlink M7 to clarify its liability and responsibility.

Recommendations include:

- The proposed modification is to provide improvements to the existing cycleway along the Westlink M7, such as grade-separated cycleway at Middleton Grange and Ash Road to address some flooding and drainage issues. A pedestrian and cyclist audit are to be carried out along the existing Westlink M7 cycleway to address any safety and access issues such as lighting and intersection crossings
- Details of the proposed cycling restrictions on the Westlink M7 mainline between the M5 Motorway and Richmond Road are to be submitted to the relevant councils and bike user groups for comments as part of the detailed design.

Response

The modification is being proposed to enable the widening of part of the Westlink M7 in response to current and projected future traffic growth, and to enhance safety and address reduced motorway efficiency. The proposed modification does not impact the existing shared path that runs parallel to the Westlink M7and therefore no changes to the shared path are required or otherwise proposed.

Further, the Westlink M7 operator conducts a shared path safety audit every two years with a certified auditor, no flooding or drainage issues along the Middleton Grange shared path have been identified to date, and no upgrade at this location is proposed as part of the proposed modification. Regarding the flood immunity of the shared path near Ash Road, Prestons, Transport acknowledges this issue and is investigating ways to improve this section as part of the proposed modification.

There are currently 16 shared path connections within the Liverpool LGA, including 10 east-west connections across the Westlink M7. In response to land use changes and surrounding development since opening of the Westlink M7, Transport has facilitated an additional two connections in the Liverpool LGA which have been incorporated into the Westlink M7 shared path since 2011:

- Southern End of Dobroyd Drive (parallel to M7), near 113 Dobroyd Drive, Elizabeth Hills
- Off Middleton Drive, near 185 Middleton Drive, Middleton Grange.

Outside of the proposed modification, Transport is committed to improving active transport through strategic planning, which is being developed independently of the proposed modification, and without ad hoc work associated with the proposed modification. This includes plans under Region and City Plans and Future Transport Strategy and is described further in Section 6.1.2.

Outside of the proposed modification, additional connections to the Westlink M7 shared user path would be similarly managed in future if it were assessed as being practicable (e.g. no significant planning, environmental or engineering constraints identified), responded to an identified need of the community (and therefore provided a genuine benefit to the community), and assessed as safe to do so.

The proposed cycling restrictions on the Westlink M7 mainline are described in the Modification Report (refer Section 4.2.8, and Section 7.3 of Appendix D (Traffic and transport assessment)), and include cyclists being prohibited from crossing at the intersections of the M12 Motorway and M4 Motorway due to safety concerns. The prohibition of cycling on the Westlink M7 mainline would mean that cyclists would use the designated shared path that runs parallel to the Westlink M7, or otherwise alternative routes across the surrounding road network. The prohibition of cyclists on the motorway is consistent with road safety best practice, in that there are inherent safety risks in allowing cyclists to travel alongside high-speed traffic travelling at 100 km/h. The prohibition of cyclists on the motorway is expected to impact a limited number of cyclists, with the cyclist counts undertaken for the assessment finding that there were less than 20 cyclists per day (on both a weekday and a weekend). Comments have been received from councils and bicycle user groups on this aspect during the public exhibition of the Modification Report. Council and bicycle user groups will be consulted during detailed design on matters regarding shared user path detours during construction.

Traffic and transport impacts

Issue description

Council notes that the traffic and transport impact assessment report on the proposed modification has modelled a number of scenarios with and without the proposed modification in order to quantify its impact on the surrounding road network.

The modelling results (Section 7.1.5 of Appendix D – Traffic and Transport Assessment report) show that a number of intersections on the surrounding road network will operate at an unsatisfactory Level of Service (LoS) by 2026 and 2036, including:

- Bernera Road/ Yarrawa Street/ Westlink M7 exit ramp/ Westlink M7 entry ramp
- Cowpasture Road/ Westlink M7 exit ramp/ Westlink M7 entry ramp, and
- Camden Valley Way/ Westlink M7/ M5 northbound entry ramp/ M31 exit ramp.

The unsatisfactory LoS of these intersections will have significant impacts on the Westlink M7 operation and the surrounding road network. The widening would bring forward the need to consider improvements to these intersections. Hence, Transport and the Westlink M7 are required to identify mitigation measures at these locations in consultation with Liverpool City Council.

Recommendations include:

- Detailed design investigations are to be carried out to develop improvement solutions on sections of Bernera Road and Cowpasture Road close to the Westlink M7 as part of the concept/ detailed design for the proposed modification
- The Bernera Road upgrade is to include a connection and crossings under the Westlink M7 and intersection upgrades at the intersection of Bernera Road/ Yarrawa Street/the Westlink M7 ramps
- Consultation is required with councils for development of the proposed improvement solutions on Bernera Road and Cowpasture Road.

Response

As detailed in Section 7.1 (Traffic and transport) of the Modification Report, the traffic modelling undertaken found that most intersections would continue to operate with the same LoS in both 2026 and 2036 with and without the proposed modification. However, the LoS at some intersections would decline from a satisfactory level (LoS A to D) to an unsatisfactory level (LoS E or F) with the proposed modification, including those listed in the submission.

Although the proposed modification would bring forward the need to consider solutions for these areas to cater for forecast increases in traffic volumes, these issues are mainly associated with population and employment growth rather than the implementation of proposed modification. Road connectivity and capacity to support the Western Sydney Aerotropolis, Southwest Growth Centre, Northwest Growth Centre, other planned employment precincts and population growth generally would be a function delivered by a combination of the motorway, arterial road, the local road network and public transport options. These projects would be prioritised for delivery in alignment with Transports *Future Transport Strategy* and other NSW Government Strategies.

Additionally, two of these intersections would also operate with an unsatisfactory LoS in either the AM or PM peak hours in 2026 and/or 2036 without the proposed modification:

- Cowpasture Road/ Westlink M7 exit ramp/ Westlink M7 entry ramp
- Camden Valley Way/ Westlink M7/ M5 northbound entry ramp/ M31 exit ramp.

Potential impacts to vehicle speeds, safety and cohesion beyond the proposed modification extents would be investigated by Transport during detailed design and in the development of the network optimisation plan.

Transport will investigate solutions for the areas where there would be declines in LoS as part of the detailed design for the project. Local councils will be consulted during the development of improvements, which would be part of the network optimisation plan and subject to separate approval processes.

Traffic and transport – interface projects

Issue description

Figure 3-4 of the traffic and transport assessment report outlines all road infrastructure upgrade projects interfacing with the proposed modification. The following projects are to be included in the interface project list.

- Moorebank Avenue upgrade and Cambridge Avenue extension and its connections to the Westlink M7 and Campbelltown Road
- The Middleton Grange Drive extension project
- The Bernera Road/ Yarrunga Street/ Yato Road intersection upgrade.

Response

An assessment of adjacent road infrastructure upgrade projects is presented in the Appendix D (Traffic and transport assessment) of the Modification Report. The SEARs issued for the proposed modification require cumulative impacts to be assessed for other projects that are approved, have started construction or have recently been completed at the time of the assessment. Projects assessed in the traffic and transport assessment were in accordance with the SEARs. and also selected under criteria that included: projects must be within the study area and within the NSW planning system (i.e. must be proposed with publicly available information). The Moorebank Avenue upgrade and Cambridge Avenue extension projects are not approved and not within the study area for the traffic model and assessment (refer Section 7.1 (Traffic and transport) of the Modification Report), and there was no publicly available information for the Middleton Grange Drive extension project or the Bernera Road/ Yarrunga Street/ Yato Road intersection upgrade at the time of undertaking the assessment. As such, these projects have not been considered as projects interfacing with the proposed modification.

Nearby projects would be reviewed during the detailed design stage of the proposed modification and Transport would consult with Council where necessary in regard to minimising potential cumulative traffic impacts between projects.

Traffic and transport – construction traffic impacts and management plan

Issue description

Table 6-8 shows that the estimated traffic volume during Westlink M7 closures is approximately 1,900 vehicles per hour along Kurrajong Road which will exceed its road capacity of 700 vehicles per hour. [An] alternative detour route is to be identified, particularly [for] heavy vehicles as a result of the proposed Westlink M7 closures. The construction of pier and widening structures at bridge widening locations would require temporary lane closures and full road closures on the Hoxton Park Road, Wilson Road, Cowpasture Road and Elizabeth Drive. These roads are major access roads to the Liverpool Local Government Area. Detailed traffic impact assessment of temporary road closures on these major arterial roads during construction is to be submitted to Council for comments.

As a result of the above, a detailed Construction Traffic and Access Management Plan (CTAMP) is to be prepared for construction activities within and outside the Westlink M7 Motorway corridor, detailing construction haulage routes, number of trucks, hours of operation, access arrangements, car park provision, pedestrian and cyclist access management plan, and traffic control measures.

Consultation is required with the relevant councils, Transport, and other stakeholders such as bike user groups for preparation of a detailed site-specific construction traffic management plan and pedestrian and cyclist access management plan during construction.

A community and stakeholder consultation plan are to be developed in consultation with Council for construction of the proposed modification. Notification is required to Liverpool City Council for any major changes to traffic flows along the Westlink M7 such as road and lane closures and traffic diversions.

The proposed modification would be constructed between 2023 and 2025, which would be during the same time periods for construction of other major transport projects, including the M12 Motorway, the Western Sydney International Airport, Sydney Metro – WSA, the M5 Motorway traffic improvement works between Hume Highway and Heathcote Road, and the Middleton Grange Drive extension project. Hence, a project construction traffic control group is to be established to coordinate and manage construction traffic activities and disruptions on a wide state road network in Western Sydney.

Response

The Traffic and Transport Assessment (Appendix D of the Modification Report) found that there would be increases in traffic along Kurrajong Road at the Westlink M7 due to the detoured traffic during construction. When used as a

detour route in the evening on a weekday, the estimated traffic volumes at 9pm at Kurrajong Road would be more than the weekday peak hour traffic volumes at this location, though it should be noted that the assessment presented a worst-case scenario and there is potential for vehicles to use other local roads. To minimise traffic disruptions, any works that necessitate the closure of a carriageway, requiring off-motorway detours or contraflow traffic arrangements, would occur out of hours.

Detour routes have been selected for their suitability to accommodate HGVs. It should also be noted that detours would only occur at night-time. Finalisation of detour routes will be undertaken during detailed design, with consideration to minimising impacts, and will be subject to consultation with Council. During Westlink M7 closures, the performance of the above-mentioned roads and their intersections would be similar to the performance experienced during a workday peak hour. In addition, early communication of road closures is likely to result in travel behaviour changes. In particular, local drivers may consider alternative travel modes, travel times or travel routes at the time of the closures such that the overall traffic volumes using the detours would be less than the predicted traffic volumes.

Construction of the proposed modification would be undertaken during standard and out of hours periods. A significant portion of the works would be undertaken out of hours, which would be subject to an out of hours work protocol. Out of hours work would be in the public interest as it would be expected to:

- Shorten the overall construction period. This would minimise disruption to the surrounding communities and road network and minimise any adverse impacts on local and regional businesses during construction
- Reduce the public's exposure to changed traffic conditions during construction where the proposed modification interfaces with local roads and the existing motorway network, reducing the extent and duration of delays and potentially improving safety
- Minimise impacts on traffic flow and congestion, for example by limiting lane and carriageway closures and other temporary traffic impacts to periods of low traffic volumes (generally at night)
- Flexibility in working hours between various construction ancillary facilities would assist to minimise impacts on traffic resulting from construction vehicles entering sites during peak periods. Appropriate communication with potentially affected community and stakeholders would be made
- During the detailed design/construction planning stage of the proposed modification, further assessment on road closures during construction, including Hoxton Park Road, Wilson Road, Cowpasture Road, and Elizabeth Drive, may be undertaken, if construction details assessed in the Traffic and Transport Assessment (Appendix D of the Modification Report) are changed.

As described in mitigation measure T1, a Construction Traffic and Access Management Plan (CTAMP) will be prepared as part of the Construction Environmental Management Plan (CEMP) in consultation with Transport, relevant local councils, and relevant agencies and in accordance with relevant guidelines including consideration for:

- Staggering shift times to minimise the hourly traffic generation
- Encouraging the use of alternative transport modes, carpooling, measures that minimise traffic generation associated with worker arrival, departures and movements between sites
- Using shuttle buses to move workers between sites
- Minimising road closures that would likely have large impacts to the network
- Pedestrian and cyclist access management plan
- Parking and access management plan.

As described in mitigation measure SE1, Transport will prepare a Community and Stakeholder Engagement Plan prior to construction (see mitigation measure SE1).

As required by mitigation measures CU1 and CU2, consultation with owners, operators, and/ or contractors of other projects in the surrounding area will occur to understand construction programmes and ensure that conflicting requirements for access, traffic lane closures, high noise and vibration generating activities, and nightworks are avoided or minimised as much as reasonably practical, in order to prevent construction fatigue for local sensitive receptors. Communication will be undertaken with the community when required and coordinated with other projects so that similar projects retain consistent messaging and complaint mechanisms. Mitigation measures NV1 (for noise and vibration) and AQ2 (for air quality) are also designed to take into account potential impacts from, and interactions with, other projects.

Noise and vibration

Issue description

Council has been receiving complaints from the existing residents in the area between Dobroyd Drive and Aviation Road in Elizabeth Hills about road traffic noise from the Westlink M7 operation. Council recommends for a noise wall to be constructed along this road section between Dobroyd Drive and Aviation Road.

Concept and detailed designs are to investigate noise level increases and to consider:

- Installation of a noise wall along the Westlink M7 between Dobroyd Drive and Aviation Road
- Installation of additional noise barrier and/or noise treatments along the section of the Westlink M7, Cecil Hills close to its intersection with Elizabeth Drive and the M12 Motorway, to mitigate cumulative noise impacts of the proposed modification
- Consideration should also be given to the following site-specific noise controls that may be implemented to minimise noise levels below the relevant Noise Management Levels:
  - Minimising the need for vehicle reversing by arranging for one-way site traffic routes
  - Using broadband audible reverse alarms, as opposed to beepers, on relevant plant and equipment to be used on-site
  - Where practicable, minimise the number of high noise-generating plant items operating concurrently
  - Require the preparation of a Construction Noise and Vibration Management Plan and complaints' handling procedure prepared under the supervision of a suitably qualified acoustic consultant
- The Construction Noise and Vibration Management Plan must identify and implement strategies to minimise noise from the proposed construction activities and incorporate approaches for promoting noise awareness by contractors.

Response

As mentioned in Section 7.2 of the Modification Report, the *Noise Mitigation Guideline* (Roads and Maritime Services, 2015b) provides three triggers where a receiver may qualify for consideration of noise mitigation (beyond the adoption of road design and traffic management measures). These are:

- The predicted design noise level exceeds the Noise Criteria Guideline (Roads and Maritime Services, 2015a) controlling criterion and the noise level increase due to the proposal (i.e. the noise predictions for the design minus the 'do minimum') is greater than 2.0 dB(A), or
- The predicted design noise level is 5 dB(A) or more above the criteria (meets or exceeds the cumulative limit, which is designed to prevent a receiver with an existing high noise level from remaining well above the criterion if the noise level did not increase significantly relative to the 'do minimum' scenario), and the receiver is significantly influenced by road noise, regardless of the incremental impact of the proposal, or
- The predicted design noise level increase due to the proposal (i.e. the noise predictions for the design minus the 'do minimum') is 12.0 dB(A) or more.

The operational noise assessment compared road traffic noise levels predicted due to the proposed modification in 2026 (modelled as the year 'at opening') and 2036 (modelled as 10 years after opening), with those predicted without the proposed modification (but assuming background traffic growth based on traffic forecast for 2026 and 2036).

During the operational noise modelling, exceedances of the applicable noise criteria were identified. These exceedances were generally generated by existing high noise levels due to operation of the existing Westlink M7.

With the implementation of noise walls proposed, the noise assessment identified 250 noise sensitive receivers considered to be eligible for the consideration of feasible and reasonable noise mitigation measures, which will be subject to further noise and vibration assessment during detailed design. Seven schools, seven places of worship and one childcare centre were also identified as being eligible for the consideration of feasible and reasonable noise mitigation measures. Potential noise management measures include (in order of preference outlined in the *NSW Road Noise Policy* (RNP) (DECCW 2011):

- Quieter road pavement surfaces
- Noise mounds
- Noise barriers
- At-property treatments.

The *Noise Mitigation Guideline* advises that noise walls should be considered where there are four or more closely spaced receivers. Residences are generally considered closely spaced where the facades are separated by less than 20 metres. In addition, design factors, such as cost to benefit ratio, constructability, and overhead power line clearance may result in these barriers being considered unfeasible and/or unreasonable.

In addition, other considerations from a community perspective may include:

- Potential visual or urban design impacts
- Potential overshadowing impacts
- Potential community safety/crime prevention considerations such as isolated walkways

- Form of future development in the area
- Preferences of the local community as identified during community consultation.

The noise assessment included a noise wall assessment and proposed several new or extended noise wall sections along the Westlink M7. A new barrier is proposed from around 1 Dobroyd Drive to 113 Dobroyd Drive, Elizabeth Hills. Due to the buffer zone between the Westlink M7 and residential properties on Clarence Drive, Elizabeth Hills, the noise barrier did not extend as far as Aviation Road. However, the design, location and overall necessity of all noise barriers would be reviewed and confirmed during the detailed design stage.

A Construction Noise and Vibration Management Plan (CNVMP) will be prepared as part of the CEMP and include, but not be limited to, the following actions and mitigation measures:

- Identify relevant performance criteria in relation to noise and vibration
- Identify noise and vibration sensitive receptors and features in the vicinity of the proposed modification
- Include standard and additional mitigation measures from the Construction Noise and Vibration Guideline (CNVG) (Roads and Maritime Services, 2016b) and details about when each will be applied
- Describe the process(es) that will be adopted for carrying out location and activity specific noise and vibration impact assessments to assist with the selection of appropriate mitigation measures
- Include protocols that will be adopted to manage works required outside standard construction hours, in accordance with relevant guidelines including for management of respite periods
- Detailed monitoring that will be carried out to confirm the modification performance in relation to noise and vibration performance criteria
- Staff and sub-contractors' responsibilities with regards to noise and vibration.

Several other mitigation measures are also proposed as part of the proposed modification including mitigation measures NV1, NV2, NV7, NV8 and NV9.

Community consultation regarding construction noise and vibration will be detailed in the Community and Stakeholder Engagement Plan for the construction of the proposed modification and will include a 24-hour hotline and complaints management process.

Soils and contamination

Issue description

The concept and detailed design are to include an assessment to address possible soil contamination. If required, the Remedial Action Plan shall be referred to the consent authority for review.

A Site Audit Statement and Site Audit Report prepared by an NSW EPA Accredited Site Auditor shall be submitted to the consent authority for review and approval confirming that:

- The nature and extent of contamination has been appropriately determined at the proposed development site
- The investigation, remediation or management plan is appropriate for the intended purpose
- The site can be made suitable for the proposed land use in accordance with the submitted Remediation Action Plan (if required).

Response

The potential for soil contamination has been assessed and is presented in Section 7.11 (Soils and contamination) and Appendix L (Contamination Impact Assessment). Mitigation measure C2 contains a requirement to undertake a Sampling, Analysis and Quality Plan and detailed site investigations prior to construction, which will determine the need for a Remedial Action Plan. Mitigation measure C3 contains requirements for any remediation required. If required, remediation will be undertaken in accordance with the relevant regulatory requirements and reported to the relevant agency (NSW EPA).

Air quality

Issue description

Council notes that AECOM has advised that air quality impacts associated with the proposed modification's operation were 'minor' and changes to the proposed modification design were not recommended. The consultant confirmed that construction and operational air quality impacts are unlikely to have a significant impact on ground level concentrations.

An Air Quality Management Plan including, a description of the measures to be implemented to ensure compliance with the conditions of consent, an air quality monitoring program for the construction and operational phases, best practice management; and mitigation of air quality impacts during worst case meteorological conditions, is to be prepared and submitted to the Department.

In addition, comprehensive monitoring is to be carried out during the construction and operational phases of the proposed widening to encourage environmental best practice and facilitate adherence with the Approval and Environment Protection Licence (if applicable).

Response

The Air Quality assessment prepared for the Modification Report concluded that the proposed modification would not lead to unacceptable air quality impacts, and that the need for more detailed assessment would not be required. This conclusion is based on the determination of potential local and regional impacts to air quality during both construction and operational stages, including potential cumulative impacts.

No operational air quality environmental measures were deemed necessary as the assessment found that the proposed modification would not result in unacceptable changes in air quality for sensitive receivers. The air quality assessment undertaken for the proposed modification (refer Section 7.3 (Air quality) and Appendix F of the Modification Report) includes mitigation measures AQ1 to AQ13 to address potential air quality impacts during construction. These mitigation measures are consistent with current industry practice and will be adopted as part of the Construction Environmental Management Plan (CEMP) for the proposed modification. If approved, requirements for air quality monitoring for the proposed modification will be determined by the DPE as part of the Conditions of Approval, and by the NSW EPA as part of the Environmental Protection Licence (EPL) required for construction of the modification.

Water quality impacts

Issue description

The proposed modification has the potential to increase stormwater flows due to the increased surface area of impervious materials. Construction activities may also result in erosion and sedimentation issues. A Construction Environmental Management Plan will be required for the proposed development to mitigate potential impacts upon receiving waters.

To mitigate potential risks to human health and the environment, it is requested that the Department takes the following matters into consideration:

- Appropriate Regulatory Authority**.** 'Road construction' is identified in Schedule 1 of the Protection of the Environment Operations Act 1997 as a scheduled activity requiring an Environment Protection Licence. It is likely that the proposed works would be classified as a scheduled activity and require an Environment Protection Licence under the Protection of the Environment Operations Act 1997
- Construction Environmental Management Plan (CEMP). A detailed Construction Environmental Management Plan (CEMP) must be prepared for the proposed modification. The CEMP must address all environmental aspects of the development's construction phases, and include, where relevant, but not be limited to, the following:
  - Asbestos Management Plan
  - Project contact information
  - Site security details
  - Timing and sequencing information
  - Site Soil and Water Management Plan
  - Noise and Vibration Control Plan
  - Dust Control Plan
  - Health and Safety Plan
  - Waste Management Plan
  - Incident Management Contingency
  - Unexpected Finds Protocol.

Response

It is acknowledged that an Environment Protection Licence (EPL) will be required for construction of the modification, as described in Chapter 5 (Statutory context) of the Modification Report. Transport will consult with the NSW EPA on this matter.

A CEMP will be prepared for the proposed modification in accordance with the '*Guideline for the Preparation of Environmental Management Plans.* (DPIE, April 2020b). This will include details of contact information, site security details, and timing and programme information. The CEMP will include the mitigation measures provided in Appendix B (updated environmental mitigation measures) of this report, which include provision for the management sub-plans listed above by Council (or relevant mitigation measures as part of the main CEMP), which

include provision for the management sub-plans listed above by Council (or relevant mitigation measures as part of the main CEMP).

Urban design and landscaping

Issue description

It is noted that the proposed modification would affect a number of viewpoints along the Westlink M7. The viewpoints within the Liverpool LGA, that have a High or High to Moderate adverse impacts rating by the project need to be mitigated through the incorporation of public art. This needs to be done in consultation with Council's Public Arts Officer.

Response

The Westlink M7 has an existing Urban Design and Landscape Plan which guides the implementation of landscape features in the road corridor. The identified viewpoints are typically where the carriageway crosses over creeks and from the shared path beneath these locations.

The Urban Design, Landscape Character and Visual Impact assessment (Appendix K of the Modification Report) notes that High to Moderate impacts are primarily due to the visual widening of the road corridor with the removal of tree canopy separating carriageways as the motorway crosses riparian corridors via bridges. The existing vegetation between the carriageway bridges would be replaced with a riparian plant community including shrubs and grasses (but not trees), which will lessen the impact over time. If opportunities for incorporation of public art which could assist in mitigating visual impacts arising from the modification are identified during detailed design, Council would be consulted.

Stormwater and water quality

Issue description

Council notes that the existing stormwater management infrastructure including detention basins and water quality treatment trains had been designed to accommodate a future widening of the road and pavement into the median.

A CEMP is to be prepared to identify strategies to mitigate potential impacts upon receiving waters.

Response

A CEMP will be prepared for the proposed modification in accordance with the '*Guideline for the Preparation of Environmental Management Plans.* (DPIE, April 2020b). This will include a soil and water management sub-plan and surface water quality monitoring program, as well as other mitigation measures to protect receiving waters (refer Section 7.4 (Hydrology and flooding), Section 7.5 (Surface water and groundwater), Section 7.6 (Biodiversity) and Section 7.11 (Soil and contamination) of the Modification Report).

Tolls

Issue description

Council notes that tolls would continue to be charged through the construction phase and that motorists would continue to pay based on distance travelled capped at 20 kilometres. Council also notes that the tolls are adjusted based on the consumer price index each quarter.

The Modification Report indicates various options are being investigated to fund the proposed modification. Council notes that travel demand on the Westlink M7 would increase with the planned M12 Motorway and Western Sydney Airport development.

At its meeting on 31 August 2022, Council discussed the Westlink M7 widening and resolved that: this submission includes a request for no additional toll charges above "standard adjustments" or toll periods to justify the construction of additional lanes be levied on the Westlink M7.

Council also knows that the M12 Motorway is being delivered as a fully toll-free road by the State Government and that Liverpool Council supports this arrangement.

Response

On the Westlink M7, motorists pay based on the distance travelled with trips capped once 20 kilometres has been travelled. These rates escalate or de-escalate with the consumer price index (CPI) each quarter. There are no planned increases in tolls above CPI escalation to fund the project.

6.9 Fairfield City Council

This section provides an overview of the comments made by Fairfield City Council. A copy of the full submission is provided in Appendix C.

Potential use of proposed additional lanes for public transport

Issue description

- A major concern raised by Council is the proposal does not adequately consider previous commitments made by Transport for NSW to reserve the existing Westlink M7 centre median for a rapid bus transit corridor
- Recommendation 1: The proponent provide further analysis and demonstrate clearer justification for the road widening proposal, including the costs and benefit of additional vehicle lanes against the potential for future public transport and/or rapid transit options within the medium strip
- Recommendation 2: Evidence of the 5 and 10-year public transport demand reviews/reports to be provided to Council.

Response

The Environmental Impact Statement (EIS) for the approved project (Roads and Traffic Authority (RTA), 2000) and Conditions of Approval (CoA) were produced in the context of strategic planning and policy documents in the early 2000's. Those strategic documents identified a growing need for public transport options within Western Sydney and other areas of Greater Sydney in general to alleviate problems of congestion stimulated by population growth. As such, the EIS for the approved project outlined that the wide central median would provide sufficient space within the road corridor that in future may allow for:

- Public transport facilities such as dedicated bus operations
- Light or heavy rail, or
- Development of additional traffic lanes.

The planning and transport strategies informing the original EIS for the Westlink M7 have now been superseded by planning, transport and other strategies which do not identify the need for the central median of the Westlink M7 to be a public transport corridor, including the *Future Transport Strategy* and *NSW Freight and Ports Plan 2018–2023 (*see Section 3 (need for the modification and strategic context) of the Modification report). Notwithstanding, the proposed modification could support more efficient connections to public transport corridors in the region. Improved efficiency in the road corridor would help to support connections to public transport nodes, including to the existing T1 Western train line service between Central Station and Emu Plains.

The proposed modification would support the future development of planned city-serving high-frequency services between Liverpool to Austral (north) and from Bonnyrigg to Western Sydney International Airport. The north-south portion of the Westlink M7 subject to the modification does not directly serve major centres nor current or future significant corridors of public transport demand to justify provision of dedicated bus facilities in public transport plans and strategies for Greater Sydney. There would however be nothing precluding opportunities to run future bus routes including Western Sydney Airport express buses along the current or proposed widened Westlink M7 if needed.

Rapid bus connections between Western Sydney International Airport and Blacktown (which would intersect with the Westlink M7) are also currently being investigated by Transport. Planning for major future "City Shaping" and "City Serving" bus corridors including the Rapid buses to Western Sydney Airport is focused on integrating with land use, unlocking development potential, and serving high demand travel between centres to justify frequent services day and night, seven days per week – outcomes unlikely to be facilitated along this portion of the M7 corridor under current transport planning priorities.

With regards to the 'public transport demand reviews', this condition has been referred to be included in long term, strategic transport master planning for the region, not just specifically the Westlink M7 corridor. This approach has been approved by DPE. In this regard, Transport has recently released an updated *Future Transport Strategy* and reference should be made here for strategic multi modal transport options.

East-West passenger rail link

Issue description

- Recommendation 3: Given the removal of land previously identified for a major public transport route within the Westlink M7 corridor, as a matter of urgency, the business case for the Parramatta to Western Sydney Airport Passenger Rail Project should be brought forward.

Response

Since the approval of the Westlink M7, key public infrastructure projects in Western Sydney have begun operating, are under construction or are in the planning phase. Current transport strategies do not identify the need for the central median of the Westlink M7 as a public transport corridor, and therefore the proposed modification does not adversely impact the region's public transport vision or functionality and thus it does not present an urgent business case to bring forth the Sydney Airport Passenger Rail Project. These current strategies have prompted the development of significant programs of public transport infrastructure and corridors in the region, such as Sydney

Metro (Western Sydney International Airport and West) and the Liverpool-Parramatta and North-West T-way bus services.

Currently, Transport is protecting land for the East West Rail link in two stages.

Stage 1 is between the Aerotropolis near Bringelly and Kemps Creek. The corridor was exhibited in the Western Sydney Aerotropolis Plan in December 2019. Following exhibition, Transport worked with key stakeholders to respond to comments and progress protection of the corridor.

Stage 2 is between the Aerotropolis near Kemps Creek and Greater Parramatta. This section of the corridor will be identified in collaboration with other Government agencies.

Fairfield urban investigation area (UIA)

Issue description

- Recommendation 4: The EIS must be revised to include closer analysis of the UIA's relationship with the proposal, including review of the Traffic Impact Assessment (TIA) and Noise and vibration impact assessment. This analysis must consider the potential of the proposal to exacerbate the negative impacts on residential amenity levels in Horsley Park and Cecil Park. This should include traffic impacts at the five key intersections negatively impacted within the project scope. Suitability of existing mitigation measures such as provision of sound walls must also be considered, having regard to the potential for medium/high density residential development in the Horsley Park and Cecil Park UIA in the future.

Response

The Modification Report takes into account future regional land use, population growth and traffic growth. Chapter 3 (Need for the modification and strategic context) of the Modification Report outlines how the proposed modification aligns with the *Greater Sydney Region Plan – A Metropolis of Three Cities* (Greater Sydney Commission, 2018a) and *Western City District Plan* (Greater Sydney Commission, 2018b) (the former of which is the conceptual origin of the Fairfield UIA).

The Fairfield UIA is a draft (not yet approved) strategic land use plan and does not contain any approved projects. Subsequently it has not been assessed in terms of potential cumulative impacts with the proposed modification (the SEARs issued for the proposed modification also only require approved projects to be considered for cumulative impacts), or in terms of impacts to potential future sensitive receivers.

A key objective of the proposed modification is to provide additional capacity on the Westlink M7 to meet future predicted traffic growth, reduce congestion and improve connectivity and reliability. Detailed traffic investigation and modelling has been carried out to understand the future demands of population growth and traffic growth along the Westlink M7 using a Strategic Traffic Model.

The TUSTM accounts for future 'induced demand' and has the ability to predict how long the additional lanes would be able to manage congestion. The Strategic Traffic Model forecasting approach comprises:

- A strategic highway network model of the Sydney metropolitan area including all major roads within the network
- Representation of future years, 2026 and 2036 by including anticipated changes and upgrades to the network
- Representation of future demand for travel by both cars and trucks to model their varying travel patterns and behaviours
- Explicit modelling of all tolls, existing and future, on the network
- Inclusion of multiple user classes within the model to reflect which in turn affects drivers' willingness to pay the toll in order to save travel time
- Modelling of future land use which feeds into the production of future demand for travel for cars and trucks using transport and population data from the NSW Government.

According to the road network assessment, the additional capacity of the proposed modification would substantially improve the general network performance of the Westlink M7 corridor and would improve vehicle speeds for the sections of the Westlink M7 that would be widened. Most intersections would continue to operate with the same LoS in both 2026 and 2036 with and without the proposed modification. The LoS at the following seven intersections would decline from a satisfactory level (LoS A to D) to an unsatisfactory level (LoS E or F) due to the proposed modification, of which only one is located in the Horsley Park/Cecil Park area:

- AM peak
  - Bernera Road/Yarrawa Street/M7 exit ramp/M7entry ramp
  - Old Wallgrove Road/Wallgrove Road/M7 entry ramp/M7 exit ramp
  - Rooty Hill Road North/M7 exit ramp

- PM peak
  - Cowpasture Road/M7 exit ramp/M7 entry ramp
  - The Horsley Drive/Wallgrove Road/M7 entry Ramp/M7 exit ramp
  - Great Western Highway/Rooty Hill Road South/Wallgrove Road
  - Rooty Hill Road North/M7 exit ramp
  - Rooty Hill Road North/Richmond Road/M7 entry ramp/M7 exit ramp.

Five of these seven intersections would also operate with an unsatisfactory LoS in either the AM or PM peak hours in 2026 and/or 2036 without the proposed modification. The proposed modification would bring forward the need to consider solutions for these areas to cater for forecast increases in traffic volumes associated with population and employment growth and to a lesser degree the proposed modification. It is unclear which five intersections are being referred to in the submission, however existing and future constraints in the broader network beyond the proposed modification extents including those areas related to the Fairfield UIA would be investigated by Transport during detailed design and in development of network optimisation plan (subject to separate planning approvals). Examples of upgrades currently in planning include the following:

- Elizabeth Drive / Devonshire Road intersection would be fully upgraded as part of the future Elizabeth Drive upgrade Elizabeth Drive / Wallgrove Road intersection will be upgraded as part of the M12 Motorway construction by 2026. Further information of the M12 Motorway project can be found at https://roads-waterways.transport.nsw.gov.au/projects/m12-motorway/index.html.

The Noise and Vibration Impact Assessment was performed for the whole length of the proposed modification, including areas located in Horsley Park and Cecil Park. As mentioned above, the Fairfield UIA has not been assessed in terms of potential future sensitive receivers.

However, noise reduction measures will be implemented that would potentially reduce the proposed modification's impact on future projects within the Fairfield UIA.

Surrounding project impacts

Issue description

- Recommendation 5: Transport for NSW must review the current strategic framework and impact of the proposed modification to clearly identify the implications for existing road infrastructure, traffic modelling, feasibility, capacity and impact on the timing for the following projects:
  - Western Sydney Intermodal Terminal at Mamre Road
  - Southern Link Road
  - Horsley Drive Upgrade
  - Upgrade of Wallgrove Road
  - Elizabeth Drive east of the Westlink M7
  - Western Sydney Freight Line.

Response

The proposed modification has been developed in accordance with relevant strategic plans, as outlined in Chapter 3 (Need for the modification and strategic context) of the Modification Report.

An assessment of potential cumulative impacts (e.g. traffic and transport, noise, air quality) of the proposed modification with other projects was undertaken and is provided in Section 7.18 of the Modification Report. The above-mentioned projects were not included in the cumulative impact assessment because they are yet to be approved and therefore did not meet the criteria provided in the SEARs for consideration of cumulative impacts. Projects included in the assessment are those recently approved, under construction or recently completed (noting also that older, previously completed projects are accounted for in the baseline data/information used for each assessment). Transport undertakes broader network reviews on an ongoing basis as part of network optimisation planning. Road connectivity and capacity to support the Western Sydney Aerotropolis, Southwest Growth Centre, Northwest Growth Centre and other planned employment precincts would be a function delivered by a combination of the motorway, arterial roads, the local road network and public transport options. These projects would be prioritised for delivery in alignment with Transport for NSW Future Transport Strategy and other NSW Government Strategies.

Operational traffic impacts

Issue description

- The Traffic Impact Assessment (TIA) states that the proposed modification would result in the following intersections in the Fairfield Council area experiencing a fall in the level of service to 2036 including increased back of queue length, resulting in the need for upgrades:
  - Old Wallgrove Road/Wallgrove Road/M7 entry ramp/M7 exit ramp
  - Cowpasture Road/M7 exit ramp/M7 entry ramp, and
  - The Horsley Drive/Wallgrove Road/M7 entry ramp/M7 exit ramp.
- Recommendation 6: Transport for NSW must commit to the required upgrades prior to the new Westlink M7 lanes opening. Alternatively, the Westlink M7 operator must undertake the work as part of the overall project proposal to minimise impacts on road users and Council's local road network, noting that, when the Westlink M7 was constructed and integrated with the existing road network, the capacity of a number of intersections needed to be improved. In addition, the report must consider Wetherill Park and Smithfield industrial areas adjacent to the Westlink M7 it is ignored in the Modification Report and is the largest key industrial estate within proximity to the proposed modification. It is also a key destination node for freight movements. Improving accessibility for freight movements from Wetherill Park onto/off the Westlink M7 and link onto Wallgrove Road (non-toll option) to access Erskine Park should be considered noting the southern link road connection.

Response

As detailed in Section 7.1 (Traffic and transport) of the Modification Report, the traffic modelling carried out found that most intersections would continue to operate with the same LoS in both 2026 and 2036 with or without the proposed modification. However, the LoS at some intersections would decline from a satisfactory level (LoS A to D) to an unsatisfactory level (LoS E or F) with the proposed modification, including those listed in the submission.

Mitigation measure T6 in the Modification Report requires that solutions should be investigated to cater for forecast traffic volumes associated with population and employment growth and to some degree the proposed modification, at the following locations:

- Bernera Road
- Cowpasture Road
- The Horsley Drive
- Great Western Highway
- Old Wallgrove
- Rooty Hill Road
- Richmond Road.

Transport would investigate solutions for the areas where there would be declines in LoS as part of the detailed design for the project. Local councils would be consulted during the development of improvements, which would be part of the network optimisation plan and subject to separate approval processes. Although the proposed modification would bring forward the need to consider solutions for these areas to cater for forecast increases in traffic volumes, these issues are mainly associated with population and employment growth rather than the implementation of the proposed modification.

As mentioned in response to 'Recommendation 4' potential impacts to vehicle speeds, safety and cohesion around the entry/exit ramps and beyond the proposed modification extents, including improving accessibility for freight movements associated with Wetherill Park and Smithfield industrial areas, would be investigated by Transport during detailed design and in the development of their network optimisation plan.

Transport is planning and delivering important improvements on key roads across Western Sydney, these improvements would help to accommodate the growing population within Western Sydney.

Construction traffic impacts: Construction traffic routes

Issue description

- Recommendation 7: Transport for NSW is to consult with Council's traffic branch prior to and during the preparation of the construction traffic management plan to ensure that the impact on Council's local roads is minimized for the construction period. Transport for NSW are to clarify the segment of Redmayne Road proposed to be used for construction vehicle routing

- Recommendation 15: A dilapidation survey is to be carried out for all council roads that will be used as construction routes prior to construction in accordance with Section 69 of the NSW Government condition of consent. In order to work on council road reserve, the applicant will need to apply for a driveway applications and road works permit if required. The dilapidation survey should include information in regard to each defect on the road surface, and other associated assets and is to be prepared by a suitably qualified person. This process will establish the extent of any existing damage and enable any deterioration during and after construction to be observed. Council's assets management team is to be contacted to provide the damage calculation methodology due to construction vehicles.

Response

As per mitigation measure T1, Transport would prepare the Construction Traffic and Access Management Plan for the proposed modification in consultation with relevant local councils.

The majority of construction vehicle movements would use the existing Westlink M7 carriageway and major roads (Elizabeth Drive, Wallgrove Road and The Horsley Drive). There are however areas that would necessitate the use local roads for access purposes, i.e. to gain access to the compound areas, the underside of bridges and areas required for utility adjustments. Local roads identified in Fairfield that would be used to provide access for bridge pier foundation works include Chandos Road, Redmayne Road, Saxony Road, Villiers Road and Austral Bricks Access, which all adjoin major roads. The portion of Redmayne Road that would be used for construction vehicle routing is the area located between the western boundary of the Westlink M7 and Wallgrove Road.

Dilapidation surveys will be undertaken prior to the works and the roads will be subject to routine maintenance during the works and when required, driveway applications and road works permits will be attained in order to work on council road reserves. Any damage as a result of the proposed modification works will be rectified.

Additionally, should the proposed modification be approved, continued consultation would take place with councils, the community, and key stakeholders during the planning and prior to the commencement of any construction activities.

Shared path impacts

Issue description

- Recommendation 8: Council requests the applicant provide further information as to the locations and period of closures along the shared pathway. Council's open space team will need to be involved in the establishment of any diversionary routes to ensure minimal impact to users. In addition, it is requested that Transport for NSW provide cycling counts for the on road cycling way to determine the number of diverted cyclists to the shared pathway
- Assessment of cycleway alternate routes needs to consider the road environment prior to being considered acceptable – Wallgrove Road is not a safer alternative due to the road shoulder/speed environment arrangements, particularly crossing the road for northbound movements. This is a very limited assessment and needs much more detail prior to being considered acceptable (or able to be assessed). As increased truck traffic is expected on Wallgrove Road, this reduces the safety of cyclists significantly.

Response

The timing, extent and duration of shared path closures and respective detours would be confirmed once the construction contractor has been appointed and would be influenced by the final construction methodology as well as feedback from stakeholders and local councils. Transport will communicate all proposed closures and detours as early as possible so that community members and stakeholders are aware of closure details.

Wallgrove Road has not been identified as a diversionary route of the shared path that currently exists for cyclists during the staging of the works for proposed modification. There should not be a significant requirement to close the shared path in this area given that there is direct access to the bridge foundation sites from local roads (Villiers Road, etc.).

Shared path 'Detour 6' crosses Wallgrove Road at the intersections of Old Wallgrove Road and Wonderland Drive but does not use Wallgrove Road as a route.

As required by mitigation measure T4 (refer to Chapter 7.1 of the Modification Report), an active transport strategy will be developed to document planned shared path detours and consider modifications to these facilities that would safely accommodate shared path users. This strategy will take into account the communities concerns, requests and proposals regarding the design of the shared path and detour routes before being finalised. Transport will include Council's open space team in the development of the active transport strategy.

Cycle counts on the Westlink M7 mainline were undertaken for the traffic and transport impact assessment as part of the Modification Report (see Section 7.1 (Traffic and transport) of the Modification Report). The counts were undertaken to estimate the number cyclists that would be diverted from the Westlink M7 shoulder to the shared pathway during construction. The cycle counts were undertaken across nine days in June 2022, and it was found that fewer than 20 cyclists per day were counted on a workday and a weekend. This would represent a small increase in riders already using the shared path, as cycle counts of northbound riders on the Westlink M7 shared

path just south of Elizabeth Drive (undertaken across nine days in February 2019) found that around 191 cyclists per day were counted on a workday and weekend.

Noise and vibration - operation

Issue description

The NVIA indicates multiple sensitive receivers that are eligible for reasonable and feasible mitigation measures because of the proposed modification. It is unclear from the report if these locations are already exceeding the critical noise limits due to existing noise generated by the Westlink M7 or if they exceed them due to proposed modification. Therefore, please clarify if the noise levels exceed critical limits due to the proposed modification. At this stage, no details have been provided regarding the location and number of residential properties affected in the Fairfield LGA. In recent meetings with WSO, Council requested the applicant provide this information to assist council officers in their assessment of the EIS. This request was declined.

- Recommendation 9: Council requests Transport for NSW provide property details of sensitive residential receivers' eligible for feasible and reasonable noise mitigation measures because of the proposed modification, as demonstrated in the relevant NVIA appendices. The applicant is to also clarify if the noise levels exceed critical limits due to the proposed modification. The NVIA and associated modelling must be independently peer reviewed to ensure the reports are validated
- Recommendation 11: Details of property owners to be confirmed with Council in relation to properties identified in the NVIA as requiring reasonable and feasible mitigation measures due to the proposed modification. This will ensure that these properties are appropriately notified. It is also recommended a contact service be established by Transport for NSW and Transurban during construction and operation of the proposed modification to assist affected members of the community, interpreting services must be provided including Auslan for those who are hearing impaired.

Response

The noise levels presented in Table 2-3 of the noise and vibration technical report (Appendix E1 of the Modification Report) indicate that the noise environments at the noise measurement locations are typical of those located along major transport corridors in suburban/urban noise areas, where daytime (7am to 6pm) and evening (6pm to 10pm) background levels are high due to heavy and continuous traffic flows. The night-time (10pm to 7am) background levels tend to decrease as a result of reduced traffic flows.

Noise sensitive receivers within the study area of the proposed modification are currently affected by appreciable levels of road traffic noise. Exceedances of the applicable noise criteria have been identified through modelling, the majority of which are exceedances of the acute noise limit. However, these exceedances are generated by existing high noise levels from the operation of the existing Westlink M7. Noise impacts resulting from and directly associated with the proposed modification were considered for appropriate noise mitigation. Therefore the sensitive receivers eligible for mitigation measures are exceeding the critical noise limits due to the proposed modification. This proposed modification will include measures to mitigate noise impacts resulting from and directly associated with the proposed modification only. This is discussed further in Section 5.2.1 of Appendix E1 of the Modification Report.

Existing noise issues outside the extent of the proposed modification, such as residential receivers exposed to noise levels exceeding acute noise levels (LAeq(15 hr) ≥65 dB(A) or LAeq(9 hr) ≥60 dB(A)), are addressed through Transport's noise abatement program.

329 sensitive receivers were considered to be eligible for the consideration of feasible and reasonable noise mitigation measures (acoustic treatments), as a result of impacts from the proposed modification, subject to further noise and vibration assessment during detailed design.

The request to provide property details was considered, however specific property addresses were not identified on the Modification Report and cannot be provided due to privacy reasons. Once a contractor is appointed and eligible properties are confirmed, property owner details would be obtained through the appropriate channels and property owners would be notified that they are eligible for noise mitigation. Communication with property owners would be undertaken in accordance with the Community and Stakeholder Engagement Plan. The number of eligible residences will be refined during detailed design when further noise assessment is undertaken.

Consultation with the affected community will occur prior to and during construction.

As outlined in mitigation measure NV2, a 24-hour hotline and complaints management process for the construction of the proposed modification will be available to the community.

If any members of the community would like to contact WSO Co during the operation of the proposed modification they may get in touch via the following lines of communication, which includes options for those who are hearing impaired:

- Email enquiry via the following link: https://www.westlinkm7.com.au/contact/email-enquiry
- Phone via the following number: (02) 9834 9200.

The noise and vibration assessment report has been prepared in accordance with relevant guidelines and policies, which are outlined in Section 3.1 of the report. The report will be reviewed by DPE and other relevant agencies as part of the modification application.

Noise and vibration - Construction

Issue description

Council request that construction activity and nighttime sleep disturbance must be kept to a minimum with standard hours for construction activities being acceptable.

Response

The noise and vibration mitigation measures proposed (NV1 to NV18, refer Section 7.2 of the Modification Report) have been proposed to minimise noise emissions and/or mitigate potential noise impacts, including out of hours noise impacts. Out of hours work will be covered in the construction noise and vibration management plan and (subject to planning approval) would be subject to Conditions of Approval and an Environment Protection Licence.

Works outside of standard hours are necessary to improve safety and reduce construction timeframes. Transport will further assess noise impacts during the detailed design and construction planning stages and consult with councils and the community on noise mitigations where relevant.

Economic impacts and community consultation

Issue description

- The Westlink M7 is a main corridor for trucks and traffic coming out of the Smithfield Wetherill Park Estate and construction works will have significant impacts on traffic movements through the area that already has issues. In this respect, the proposed construction works will have significant implications for the operations of businesses in the Estate
- Recommendation 10: Impact on business operations, truck movements and staging of the works needs serious consideration given the impact the proposed modification will have on traffic merging into the Westlink M7. A strong marketing plan needs to be implemented to ensure all businesses in the Wetherill Park Industrial estate are provided with ongoing updates and significant notice of commencement of works and areas of maximum impact so that businesses can plan alternate routes where possible
- Council requests further information on the level of consultation undertaken to date and which stakeholders/sections of the community were consulted. The idea of random consultation would likely miss some of the key businesses and residents that will be affected by the works.

Response

Traffic and transport impacts on business operations and truck movements adjacent to the Westlink M7 as a result of the proposed modification have been assessed in Section 7.1 (Traffic and Transport) and Section 7.12 (Social) of the Modification Report.

Construction traffic volumes on the Westlink M7 are expected to increase by up to two percent per day or between one to three percent during the peak hours. These traffic volume increases are considered minor.

Traffic volumes on State roads could increase by up to six percent per day due to construction traffic accessing ancillary facilities, for example the percentage increase expected for Cowpasture Road located adjacent to the Smithfield Wetherill Park Estate is two percent. For most locations, these increases are expected to have minimal impact on the operation and safety of these roads given the existing traffic volumes and road network conditions.

Bridge widening works would require temporary lane closures and traffic detours that would only occur at night-time. On most roads that would accommodate the detoured traffic, the estimated traffic volumes at 9:00 pm is less than or equal to the workday peak hour traffic volumes. Therefore, the surrounding road network and intersection performance during the Westlink M7 closures for most locations are expected to be similar to the existing workday peak hour performance, most of which perform with an overall LoS D or better.

The construction of pier and abutment widening structures at bridge widening locations would require temporary lane closures and at times full road closure of Cowpasture Road (in Middleton Grange, Hinchinbrook and Hoxton Park), which may impact the Smithfield Wetherill Park Estate. These road closures would typically be for short durations, at workday nights or on weekends and would require vehicles to take detours along alternative routes for the duration of the closure. Although no local detours are available for the Cowpasture Road closures, strategic road diversions via the broader arterial road network would be implemented to facilitate closure of this road.

Subject to approval and prior to construction commencing for the proposed modification, Transport will notify and consult with Council and key stakeholders on the proposed construction timeframes and construction activities, in accordance with relevant mitigation measures and the Community and Stakeholder Engagement Plan. As mentioned in mitigation measure T1 a Construction Traffic and Access Management Plan (CTAMP) will be prepared as part of the Construction Environmental Management Plan (CEMP) in consultation with Transport, relevant local councils and relevant agencies, and in accordance with relevant guidelines.

Details of the consultation process are located in Section 6 (Consultation) of the Modification Report, which outlines the specific stakeholders/sections of the community that were consulted. Community and business surveys were also undertaken as part of the Social Impact Assessment (refer Appendix M of the Modification Report). Residential surveys were carried out between 30 May and 12 June 2022 on streets that were reflective of the social locality, which was based on areas that had the potential for more acute impacts from the proposed modification. The businesses surveyed were chosen as they are reliant on the Westlink M7 to provide services or transport freight. Further details of this process may be found in Section 7.12 (social) of the Modification Report.

Consultation with Council, the community and stakeholders would continue as the proposed modification progresses (subject to planning approval). Consultation is also summarised in Section 2.0 of this report.

The project Infoline, website and email address would be retained for enquiries and updates during construction, which will be available for all businesses in the Wetherill Park Industrial Estate.

Catchment planning

Issue description

- Recommendation 12: All basins should retain a minimum of 0.3 metre freeboard for the 1% AEP and modifications should be made to the basins that do not meet this requirement due to modification. Transport for NSW have reviewed risk associated with the proposed modification but have not addressed the role the road plays as a major evacuation route during natural disasters. Recent works undertaken as part of the Georges River Regional Flood Evacuation Study (DPE & Liverpool Council) highlights how important the road is to ensuring people are able to evacuate during regional floods, and this needs to be addressed as part of the modification to ensure the capacity required can be achieved.

Response

The level of flood immunity to the Westlink M7 would be maintained during operation of the proposed modification. The bridge waterway and transverse drainage structures along the existing Westlink M7 were designed to provide a 1% AEP level of flood immunity to its carriageways. This level of flood immunity would be achieved under both pre- and post-proposed modification conditions and the proposed modification would have only a minor impact on peak flood levels during a 1% AEP design storm event.

Additionally, the assessment of future climate change on flooding during operation of the proposed modification (see section 7.4.5 of the Modification Report) found that while depths of inundation would be increased along any drainage lines that cross the operational footprint, the main carriageways of the Westlink M7 would remain flood-free under both climate change scenarios assessed (scenarios 1 and 2, corresponding to storm events of 0.5% AEP and 0.2% AEP, which represent a 10% and 30% increase in the current 1% AEP event). It is not expected that basins would need to be modified to accommodate additional capacity, however they will be reviewed at detailed design (refer mitigation measure SW8).

Given the minor changes in both peak flood levels and flow velocities that are attributable to the proposed modification, the assessment concluded that it would not increase the flood hazard for surrounding existing development for all events up to 1% AEP. It would also not have an adverse impact on NSW State Emergency Service's emergency response arrangements and the existing community emergency management arrangements will remain in place. Furthermore, the additional capacity of the proposed modification would substantially improve the general network performance of the Westlink M7 corridor and would improve vehicle speeds for the sections of the Westlink M7 that would be widened.

Toll revenue

Issue description

- Recommendation 13: The toll collection authority must demonstrate how increased toll revenue will be used to upgrade regional active transport links effected by the proposal, contribute to the upgrade of council infrastructure degraded by the construction period of the proposed modification, including Redmayne Road and contribute to upgrades at key intersections impacted by the proposed modification.

Response

On the Westlink M7, motorists pay based on the distance travelled with trips capped once 20 kilometres has been travelled. These rates escalate or de-escalate with the consumer price index (CPI) each quarter. There are no planned increases in tolls above CPI escalation to fund the project.

Any additional revenue resulting from traffic uplift from the additional road capacity from widening the road will be utilised as a funding source for the Westlink M7 Widening works. This investment will provide significant user benefits to Western Sydney residents who rely on the Westlink M7 as a critical transport Noting that the traffic uplift from the widening works is not expected to generate sufficient revenue to cover the widening cost, any additional works (active user links, intersection upgrades) would require separate funding arrangements.

Any council assets that were degraded as a result of widening works would be reinstated at completion of the proposed modification.

Surrounding road projects

Issue description

- Recommendation 14: The traffic modelling must be revised to include assessment of the impact of the increased capacity on Elizabeth Drive east of the Westlink M7 and resulting upgrades requirements, due to the proposed modification
- The capacity of the interchange at Old Wallgrove Road needs upgrading or the removal of the merge/diverge at the M4 Motorway benefits will be dissipated very quickly.

Response

The study area for the Traffic and Transport Assessment (Appendix D of the Modification Report) was informed by forecast traffic and transport changes from a Strategic Traffic Model, that covers the Sydney metropolitan area. The extent of the study area and the areas requiring operational modelling assessment were determined through analysis of strategic model 'difference plots' between the 'with modification' and 'without modification' scenarios. The plots indicate that the anticipated off-motorway 'impact' of the proposed modification would be restricted largely to the immediate interchanges between the M5 Southwestern Motorway and Richmond Road.

The operational assessment presented in Section 7.0 of the Traffic and Transport Assessment (see appendix D of the Modification Report) also considers the cumulative impacts of the following key projects:

- Elizabeth Drive upgrade
- M12 Motorway and Elizabeth Drive Connection project
- The Horsley Drive upgrade (qualitative only)
- Richmond Road upgrade (qualitative only)
- Other planned road network upgrades that are included within the TUSTM, which covers the Sydney metropolitan area.

An upgrade of Elizabeth Drive east of the Westlink M7 is not a current proposal, and subsequently not assessed for cumulative impacts. Although, further widening of the Westlink M7/Elizabeth Drive interchange will occur as part of the proposed M12 Motorway development, resulting in the reconfiguration of the intersection to improve performance. Traffic impacts in this area have been assessed as part of the M12 Motorway Environmental Impact Statement.

Note that road connectivity and capacity to support the Western Sydney Aerotropolis, Southwest Growth Centre, Northwest Growth Centre and other planned employment precincts would be a function delivered by a combination of the motorway, arterial road, the local road network and public transport options. These projects would be prioritised for delivery in alignment with Transport's *Future Transport Strategy* and other NSW Government strategies.

Additionally, as outlined in mitigation measure T6, solutions should be investigated to cater for forecast traffic volumes (associated with population and employment growth and to some degree the proposed modification) at a number of locations, including Old Wallgrove Road. Upgrades to Old Wallgrove Road would be investigated by Transport during detailed design and in their network optimisation plans (solutions would be subject to a separate approvals process).

As mentioned above the following upgrade is also currently in planning:

- Elizabeth Drive / Wallgrove Road intersection will be upgraded as part of the M12 Motorway construction by 2026. Further information of the M12 Motorway project can be found at https://roads-waterways.transport.nsw.gov.au/projects/m12-motorway/index.html

Asset handover to Council

Issue description

Recommendation 16: If any assets are required to be handed over to Council, the proponent must:

- Prepare and provide list of assets which are proposed to be handed over to Council
- Provide prepare list of council assets are proposed to be demolished or impacted by the proposed design
- Life cycle cost analysis to be performed for the life of assets and provided to Council. Whole of life cycle cost (capital and maintenance costs) to be provided to Council for the operation of the proposed new assets. Council is happy to provide the useful life of the proposed new assets for life cycle analysis
- How will the life cycle cost be funded? How will Fairfield community be compensated?
- What land is proposed to be resumed by Transport from council
- What new land is proposed to be handed over to council by Transport, and
- List of proposed green assets, for example: trees.

Response

Any assets requiring to be handed over to Council (e.g. drainage works from bridge abutments) will be identified during detailed design. Transport will consult with Council during detailed design on this matter.

Contamination

Issue description

- Recommendation 17: Any contamination register developed must be provided to Council as part of a condition of consent. Detailed Site Investigation report and any further sampling and analysis must be provided to Council.

Response

If approved, Transport will undertake the proposed modification in line with Conditions of Approval issued by DPE. The proposed modification includes mitigation measures for undertaking a sampling analysis and quality plan and subsequent detailed site investigations for potential contamination (refer Section 7.11 (Soils and contamination) of the Modification Report). Contamination investigation reports will be provided to relevant government agencies in line with statutory requirements. Transport can provide Council copies of any assessment reports on council land (e.g. for land being handed back to Council).

Construction dust emissions

Issue description

- Recommendation 18: The agency and individual accountable for air quality and dust issues shall be clearly identified and responsibilities outlined for the whole duration of the project.
- It is expected that a clear communications plan will be developed, and residents notified of a simple pathway to address any air quality issues that may be happening at the time and the person/s responsible. Particular attention should be given to those areas such as Horsley Park with a quintile factor of 1 and the best means of communication and interaction with those community groups, in ensuring that mitigation measures are sufficient, effective and being properly maintained.

Response

Air quality and dust levels will be regulated by the DPE under the Conditions of Approval, and the NSW EPA under an Environment Protection Licence. The construction contractor will be responsible for air emissions that are produced during the construction phase and specific responsibilities will be described in the construction environmental management plan (CEMP), which will be developed in consultation with local Councils.

Air quality mitigation measures consistent with current industry practice will be adopted in the CEMP and implemented during construction to meet air quality performance outcomes. As per mitigation measure AQ1, a communications plan will be displayed at each construction zone such as those located in Horsley Park, which will include a duty phone number so stakeholders and community members can get in contact regarding the construction activities. All complaints will be recorded and investigated, and measures taken in response.

6.10 Blacktown City Council

This section provides an overview of the comments made by Blacktown City Council. A copy of the full version of the submission is provided in Appendix C.

Public transport enhancement measures

Issue description

Conditions 36 and 42 of the original Conditions of Approval that was granted on 28 February 2002 required the proponent (operator) to regularly review (five years after opening and every ten years subsequently up to 25 years) the operation of the freeway and assess the potential demand for public transport and services.

The exhibited documents dismiss the need for public transport and do not provide any analysis of future likely need for public transport along the motorway.

Whilst there is a statement that the proposed works do not preclude future use of the motorway for public transport facilities, no analysis, investigation of the costs of retrofitting a future public transport option, or other evidence is provided to support this statement.

The most recent of these investigations into public transport services on the Westlink M7] should be included in the exhibited documents in addition to cost benefit analysis of how public transport could be accommodated in the widening proposal.

Response

No public transport facilities are proposed along the Westlink M7 as part of the proposed modification. Condition 36 of the original Planning Approval required that the original project be designed to accommodate the future provision

of public transport facilities, such that retrofitting for dedicated public transport use is not precluded in the future. However, the planning and transport strategies which informed the original EIS, and approved project have been superseded by new metropolitan and infrastructure strategies developed by Transport as the transport network operators, including the recently updated (as of September 2022) *Future Transport Strategy,* and the *NSW Freight and Ports Plan 2018–2023*. These current transport strategies do not identify the need for the central median of the Westlink M7 between Prestons and Oakhurst/ Glendenning to be a public transport corridor. Alleviating capacity constraints on Greater Sydney's road network and the public transport system through the provision of public transport infrastructure has moved away from the Westlink M7. Instead, increasing the road capacity of this key north-south motorway, in conjunction with the development of the network of public transport infrastructure projects in Greater Sydney and western Sydney in particular, would support the objectives of the strategic metropolitan and transport documents shaping Greater Sydney's growth.

With regard to Condition of Approval 42 of the original Planning Approval, the requirements of this condition have been included in long term, strategic transport master planning for the region, and therefore reviews for the potential demand for dedicated public transport services are undertaken by Transport at a regional level rather than the project level. This approach has been approved by DPE. In this regard, Transport have recently released the updated *Future Transport Strategy*, which aims to provide multi-model travel choices for customers, supporting sustainable, seamless end-to-end journeys that prioritise car-free, active, sustainable transport options.

As noted in the submission, the proposed modification would not preclude the provision of public transport on the Westlink M7 if a need for this is identified in the future. The footprint of the proposed modification (within the existing road median) could be re-purposed for public transport in the future if demand or transport priorities change. The proposed modification could support more efficient connections to public transport corridors in the region. However, this north-south portion of the M7 does not directly serve current or future significant corridors of public transport demand to justify provision of dedicated bus facilities (for example) in current public transport plans and strategies for Greater Sydney. Improved efficiency in the road corridor would help to support connections to existing public transport corridors, including to the T1 Western train line service between Central Station and Emu Plains. The proposed modification would not preclude future planned city-serving high-frequency services between Liverpool to Austral (north) and from Bonnyrigg to Western Sydney International Airport. Rapid bus connections between Western Sydney International Airport and Blacktown (which would intersect with the Westlink M7) are also currently being investigated.

Castlereagh Connection

Issue description

The Castlereagh Connection is proposed to intersect with the Westlink M7 at its junction with Richmond Road. The design of the interchange at the intersection of the Castlereagh Connection, the Westlink M7, and Richmond Road needs to be progressed as a matter of priority. Any upgrade of the Westlink M7 needs to be able to accommodate the proposed interchange design.

Response

The Bells Line of Road – Castlereagh Connection is new extension proposed by Transport between the Bells Line of Road at Kurrajong Heights and the existing motorway near the junction of Richmond Road with the Westlink M7 at Colebee.

The scope of the proposed modification extends to the Richmond Road entry and exit ramp. The interchange at the intersection of the Westlink M7 and Richmond Road does not form part of the scope of the proposed modification. The Castlereagh Connection recommended corridor out for public consultation in 2018 identifies potential future connections to the Westlink M7 and to Richmond Road, with tie-ins to the Westlink M7 at the northern end of the proposed widening (Transport, 2018). The modification does not preclude connecting the future Castlereagh Freeway to the Westlink M7.

Richmond Road

Issue description

Richmond Road is a key commuter and freight route. Any proposal to increase the capacity of the Westlink M7 needs to be developed in the context of the surrounding road networks and the need to coordinate actions to avoid adverse impacts elsewhere.

Response

Richmond Road was considered as a key interfacing route within the study area for the traffic and access assessment in Appendix D (Traffic and Transport Assessment) of the Modification Report. Section 5.4.2 of the report notes that Richmond Road carries one of the highest volumes of traffic of the roads adjacent to the Westlink M7.

Transport acknowledges that Richmond Road requires an upgrade and the proposal to upgrade Richmond Road from the Westlink M7 to Beirkshire Park is currently in planning phase. Further information may be found at the following webpage:

https://investment.infrastructure.gov.au/projects/ProjectDetails.aspx?Project_id=117848-21NSW-NP

The benefits of this project are:

- Reduced congestion and improve travel times
- Improved efficiency and network reliability
- Improved connectivity between people with jobs and services, and goods with markets
- Improved accessibility and connectivity of road networks
- Planning and design of future public investments.

Additionally, mitigation measure T6 in the Modification Report requires that solutions be investigated to cater for forecast traffic volumes associated with population and employment growth and to some degree the proposed modification, at locations that include Rooty Hill Road and Richmond Road. In areas where there would be declines in LoS, Transport will investigate solutions as part of the detailed design for the proposed modification. As part of the network optimisation plan and subject to separate approval processes, local councils will be consulted during the development of improvements.

Flood evacuation

Issue description

Richmond Road will be a key element of any [flood] evacuation strategy. … Richmond Road is already at capacity and therefore its ability to fulfil this flood evacuation role will be limited by:

- Its inability to accommodate additional vehicle movements in a short period of time
- The weather conditions that are likely to be prevailing at the time.

Resolving the current capacity and design issues associated with Richmond Road need to be dealt with as a matter of priority and in advance of any upgrade of the Westlink M7.

Response

As mentioned above Richmond Road is proposed to be upgraded under a separate project.

Further, the Hawkesbury Nepean Valley Flood Evacuation Road Resilience Program is underway to improve the immunity of existing evacuation routes to local and flash flooding in a major flood event. Road infrastructure improvements have been identified across four Western Sydney Local Government areas, including Blacktown.

NSW and Australian Governments have committed $33 million towards planning for more than 100 improvements that will make the flood evacuation network more resilient, including include road shoulder widening, new culvert and bridge structures, road raising, pinch point upgrades and drainage improvements to address local flash flooding which causes premature closure of evacuation routes.

More information of the Hawkesbury Nepean Valley Flood Evacuation Road Resilience Program can be found at the following webpage:

https://roads-waterways.transport.nsw.gov.au/projects/flood-resilience-program/index.html

Strategic planning context and local circumstances

Issue description

Council wishes to object to the proposal due to the opportunistic nature of the proposed modification and its lack of integration and coordination with important considerations.

- There is a general lack of any strategic basis for the proposal in State Government Plans, including:
- State Infrastructure Strategy 2022 – 2042
- Future Transport Strategy 2056
- Metropolitan Plan
- District Plans (i.e. Western Parkland City and Central River City)
- Northwest Grown Centre Road Network Strategy.

The exhibited documents fail to address key state and local council strategy documents. The proposed modification does not enhance the environment where it is located, nor does it improve accessibility and connectivity for communities and public spaces.

The widening of the Westlink M7 is a once in a lifetime opportunity to re-stitch communities that were severed by the construction of the Westlink M7. Such a project can provide existing and new communities with walking and cycling access to regional and local facilities like the Western Sydney Regional Parklands.

The proposal to widen the Westlink M7 fails to address specific requirements of the SEARs relating to active transport and improving accessibility and connectivity for communities and public spaces. The widening proposal does not provide for any enhancement in the active transport between the areas severed by the motorway or

strategically analyse the Westlink M7 cycleway. No investigation of increased active transport needs since the motorway was initially built has been undertaken within the exhibited documentation.

The proposal ignores the negative and permanent effects of the motorway on people movement. The documents narrowly focus on vehicle movement along the motorway when they discuss improving connectivity. Improving connectivity for other forms of transport, such as active transport, is ignored. The proposed widening does not align to the guiding principles of the *Future Transport Strategy 2056*, nor has early collaboration with stakeholders taken place.

The project documentation fails to review the implications of a number of changes that have occurred in Western Sydney and how these changes manifest in the need for improved access across the motorway for local and regional communities.

The proposal has failed to strategically assess the contribution of the Westlink M7 cycleway is making to active transport in Western Sydney and how it links to and could enhance the wider active transport and public transport networks.

There is no discussion or analysis about Western Sydney as a place and its character and how that character is evolving. The proposal fails to contribute to enhancement of 'place' along the entire motorway, there are no proposals for additional public art, lighting features, entry statements to suburbs or improved wayfinding.

Response

An overview of the strategic need of the proposed modification is presented in Chapter 3 (Need for the modification and strategic context) of the Modification Report. Relevant strategic plans have been considered, including:

- Future Transport Strategy 2056 (recently updated to Future Transport Strategy)
- NSW Freight and Ports Plan 2018 – 2023
- Western Sydney Employment Area (State Environmental Planning Policy (SEPP) (Industry and Employment) 2021.

Greater Sydney Region Plan – A Metropolis of Three Cities (note this will be superseded by the Six Cities Regional Plan which is currently in development (a discussion paper was released in September 2022))

- State Infrastructure Strategy 2018-2038 – Building Momentum
- Infrastructure Priority List
- Western City District Plan
- Central City District Plan.

The current active travel movements across and adjacent to the Westlink M7 would be maintained during operation of the proposed modification. As the proposed modification is being proposed in response to current and projected future traffic growth, and to enhance safety and address reduced motorway efficiency, improvements to active travel linkages and connections within the wider network are not within the scope of the proposed widening.

There are currently 66 connections from the Westlink M7 shared user path to the local road network (including a number of existing connections to the Western Sydney Parklands). Facilitating requests for additional connections by Council (at their cost) would be subject to a road safety audit; extra connections could be added if it were assessed as safe to do so.

Additionally, the *Future Transport Strategy* (Transport, 2022a) commits Transport to develop an Active Transport Strategy to guide communities, councils, and industry plan and invest in walking and cycling infrastructure across the state. Strategic Cycleway Corridors will be developed for each of the six cities in Greater Sydney (see *Six Cities Discussion Paper* (Greater Cities Commission September 2022)), along with regional networks. This Program identifies 30 strategic cycleway corridors making up approximately 250km of network. Similar programs will follow for the other five cities, including the Western Parkland City.

The identified Cycleway Corridors will be developed in sections to progressively expand the connected network. Transport will continue to work with councils and partners to progress these immediate opportunities as well as expanding the program to include other corridors within the strategic network such as the Westlink M7 Shared Path.

Transport under the Get NSW Active grants program, encourages councils to plan ahead, develop a program of works and consider different funding options for proposed projects. The Get NSW Active's strategic objectives are aimed at:

- improving bike riding to and within centres, neighbourhoods and to key destinations
- improving walkability in centres, neighbourhoods and at key destinations, and
- enabling vibrant centres and liveable neighbourhoods through the creation of street environments that prioritise walking and cycling.

This approach enables Transport for NSW to progressively plan and expand networks and support councils to develop a sustainable forward program of walking and cycling projects that provides tangible benefits for our communities and customers.

Enhanced people movement, road connectivity and capacity to support the Western Sydney Aerotropolis, Southwest Growth Centre, Northwest Growth Centre and other planned employment precincts would be a function delivered by a combination of the motorway, arterial road, the local road network and public transport options. These projects would be prioritised for delivery in alignment with Transport's *Future Transport Strategy* and other NSW Government strategies.

In regard to Western Sydney's sense of place and character, the SIA (Appendix M of the Modification Report) provides an impact assessment of community values and sense of place during construction (Section 7.2.2) and operation (Section 8.4 and 8.5). To improve the decline in amenity (resulting in a loss of sense of place), proposed mitigation measures include implementation of operational noise measures and designing the proposed modification to integrate into the existing visual environment.

The Westlink M7 has an existing Urban Design and Landscape Plan which guides the implementation of landscape features in the road corridor. The visual impact of the proposed modification due to the removal of existing vegetation between the Westlink M7 bridges would be mitigated by replacement planting with a riparian plant community including shrubs and grasses (but not trees). Clearing and landscaping/ tree planting plans would be finalised during detailed design. If opportunities for incorporation of public art which could assist in further mitigating visual impacts are identified during detailed design, Council would be consulted.

Consultation

Issue description

Consultation has been perfunctory, is flawed and in some cases the consultation results reported are very misleading. … The SEARs require that the proposal be informed by consultation with local, State and Commonwealth government agencies. It is clear that the documents have not been informed by consultation. Only during the exhibition phase, was a briefing offered to Council. An email offering a briefing was sent to Council on the 10 August – 7 days after the formal exhibition period commenced.

The proposal purports to have consulted with the community but confined this consultation to a very narrow band of land beside the motorway corridor. …

Response

Transport acknowledges Council's comments on consultation. The consultation that has been undertaken with Blacktown Council regarding the proposed modification has included:

- Email to Blacktown City Council (Council@blacktown.nsw.gov.au) on 12 May 2022 including a slide pack containing an overview of the proposed modification, and an offer for a briefing to inform Council's review of the draft SEARs, which were sent to Council by DPE on 10 May , before exhibition in early August
- Email to Council's Department Head and Environment representative on 17 June 2022 regarding Westlink M7 Motorway widening proposal – Upcoming consultation on the proposal
- Email to Council's Department Head and Environment representative on 4 August 2022 regarding the Westlink M7 Motorway Widening – Modification Report on Exhibition
- Voicemail and follow up email to Council Planner on 10 August 2022 regarding a proposed briefing on 15 August 2022
- Briefing with Blacktown City Council representatives on 9 September 2022.

Transport, and DPE will inform the community and stakeholders when a decision has been made regarding the modification application. Should the proposed modification be approved, continued consultation would take place with Council, the community and other key stakeholders during detailed design and prior to the commencement of any construction activities.

Land acquisition

Issue description

Property acquisition was a key condition (COA 172) of the original development approval SSI0663. …Council is yet to receive compensation for a number of land parcels that are being used for motorway purposes despite multiple requests that this matter be finalised.

Response

Transport acknowledges that acquisition of the land was required to be completed post the construction of the existing Westlink M7 motorway. These matters are underway, and Council will be contacted directly.

Any compensation will be assessed under the provisions of the *Roads Act 1993* and the *Just Terms Compensation Act 1991*.

Traffic impacts during operation

Issue description

The Westlink M7 is currently chronically congested particularly for southbound traffic and has limited south-facing and west-facing ramps for access to and from the proposed Western Sydney Airport.

Access to the Westlink M7 could be improved by providing additional south-facing and west-facing ramps, to improve access to and from the proposed Western Sydney Airport for Western Sydney residents.

Westlink M7 does not have any south-facing ramps between Old Wallgrove Road at Eastern Creek and Woodstock Avenue at Rooty Hill.

Westlink M7 does not have any west-facing ramps between Sunnyholt Road at Acacia Gardens and Richmond Road at Glendenning.

The future Outer Sydney Orbital does not integrate with the Westlink M7 Motorway as it is currently proposed to terminate at Richmond Road. To resolve this concern the northern end of the Outer Sydney Orbital must not be terminated at Richmond Road.

Response

The proposed modification is described in Chapter 4 (Proposed modification) of the Modification Report. Proposed changes to interchanges are described in Section 4.2.2 of the Modification Report. The proposed widening is not proposing to construct new entry and exit ramps; only modify existing ones including:

- The entry and exits between the Westlink M7 and the M4 Motorway westbound
- The entry and exits between Westlink M7 and the M5 Motorway
- The entry from the Northern (Richmond Road) Connection
- The exit to the Rooty Hill Road North.

The approved M12 Motorway will connect the Westlink M7 to the approved Western Sydney International Airport. The M12 Motorway will extend west from the Westlink M7 at Elizabeth Drive, Cecil Park, where a new west facing M12/M7 interchange is to be constructed. Opening of the M12 Motorway is expected to commence six months prior to the opening of the Western Sydney International Airport. The design of the proposed modification has considered the interface with the M12 Motorway/ M7 interchange. Subject to construction planning, it is proposed that the Westlink M7/M12 interchange works and Elizabeth Drive connection for the M12 Motorway be constructed at the same time as the proposed modification as there are potential social and environmental benefits in delivering the intersection of these key arterial roads in an integrated manner that minimises disruption during construction and operation (refer to Section 4.2.2 and Section 4.3.14 of the Modification Report).

The proposed modification would not change the future connections to or alter the proposed alignment of the Outer Sydney Orbital.

Road connectivity and capacity to support the Western Sydney Aerotropolis, Southwest Growth Centre, Northwest Growth Centre and other planned employment precincts would be a function delivered by a combination of the motorway, arterial road, the local road network and public transport options. These projects would be prioritised for delivery in alignment with Transport for NSW Future Transport Strategy and other NSW Government Strategies

The level of access to the Westlink M7 needs to balance convenience for users with efficient motorway operations and safety, noting that closely spaced entries and exits can adversely impact on both of these operational aspects as a result of merging and weaving conflicts.

Engineering constraints and cost are also a key factor in deciding the feasibility of additional access points. The current level of access to the motorway is considered suitable and is not proposed to be modified as part of the proposed modification.

In relation to the suggested south facing ramps at Eastern Road, exit and entry ramps are not feasible due to the close proximity of Eastern Road to the north facing Great Western Highway ramps (approximately 1 kilometre spacing). *Austroads Guide to Road Design Part 4C* (Interchanges clause 2.4.2) states " The general conclusion that can be drawn from these requirements is that the minimum spacing of interchanges is in urban areas about: – 2 kilometres on four-lane freeways (i.e. two lanes in each direction); – 3 kilometres on six-lane freeways. It is emphasised that these minimum spacing for urban areas are not necessarily desirable and should be checked to ensure that the main carriageways will operate satisfactorily. Traffic analysis may indicate that the desirable spacing is greater than these values. It follows that the ultimate number of lanes should be considered when the location of interchanges is initially planned." As a result south facing ramps at Eastern Road and not considered to be feasible.

Intersection performance during operation

Issue description

The traffic report identified traffic increases across the wider road network with the proposed widening, as a result of the Westlink M7 attracting traffic from the surrounding network.

Traffic modelling identified that congestion would worsen to LoS E and F in the morning or afternoon peaks. This would require upgrade of the following nearby intersections:

- Richmond Road at Rooty Hill North and M7 entry and exit ramp
- Great Western Highway at Rooty Hill Road South and Wallgrove Road, and
- Wallgrove Road at Old Wallgrove Road and M7 entry and exit ramp.

Response

The objectives of the proposed modification include:

- Provide additional capacity on the Westlink M7 to meet future traffic growth, reduce congestion and improve connectivity and reliability
- Avoid and minimise impacts on the road network, the community and environment during construction
- Integrate with the new M12 Motorway, minimising disruption during construction and providing safe and efficient connectivity in the operations phase.

As detailed in Section 7.1 (Traffic and transport) of the Modification Report, the traffic modelling undertaken found that most intersections would continue to operate with the same LoS in both 2026 and 2036 with and without the proposed modification. However, the LoS at some intersections would decline from a satisfactory level (LoS A to D) to an unsatisfactory level (LoS E or F) with the proposed modification, including those listed in the submission.

Although the proposed modification would bring forward the need to consider solutions for these areas to cater for forecast increases in traffic volumes, these issues are mainly associated with population and employment growth rather than the implementation of proposed widening.

It is acknowledged that following the completion of the proposed modification intersections in the Blacktown City Council area would experience a fall in level of service, however, two of these intersections would also operate with an unsatisfactory LoS in either the AM or PM peak hours in 2026 and/or 2036 without the proposed modification:

- Great Western Highway at Rooty Hill Road South and Wallgrove Road
- Wallgrove Road at Old Wallgrove Road and M7 entry and exit ramp.

Potential impacts to vehicle speeds, safety and cohesion beyond the proposed modification extents would be investigated by Transport during detailed design and in the development of their network optimisation plan.

Mitigation measure T6 in the Modification Report requires that solutions be investigated to cater for forecast traffic volumes associated with population and employment growth and to some degree the proposed modification, at the following locations:

- Bernera Road
- Cowpasture Road
- The Horsley Drive
- Great Western Highway
- Old Wallgrove
- Rooty Hill Road
- Richmond Road.

Transport will investigate solutions for the areas where there would be declines in LoS as part of the detailed design for the project. Local councils will be consulted during the development of improvements, which would be part of the network optimisation plan and subject to separate approval processes.

Road connectivity and capacity to support the Western Sydney Aerotropolis, Southwest Growth Centre, Northwest Growth Centre and other planned employment precincts would be a function delivered by a combination of the motorway, arterial road, the local road network and public transport options. These projects would be prioritised for delivery in alignment with Transport for NSW Future Transport Strategy and other NSW Government Strategies.

Cycleway connectivity

Issue description

Additional shared user path cycleways are required to improve cycle access to and from the Westlink M7 cycleway network, including along:

- Richmond Road
- Great Western Highway
- Francis Road
- North Parade for access to Rooty Hill Station.

Additional shared user paths along Richmond Road to connect the cycleway network to the Westlink M7 at Richmond Road [are requested]. Several missing sections are identified along Richmond Road from Balmoral Street at Blacktown to Richmond Road at the South creek bridge.

Response

The modification is being proposed to enable the widening of part of the Westlink M7 in response to current and projected future traffic growth, and to address reduced motorway efficiency and enhance safety. The proposed modification would reinstate the existing shared user path that runs parallel to the Westlink M7 following construction of the widening.

There are currently 42 connections from the Westlink M7 shared path to the local road network within the footprint of the proposed modification, with 19 of these located within the Blacktown LGA, and 10 providing an east-west connection. The existing connections would be maintained as a result of the proposed modification.

The proposed modification would not change active transport movement or connection to place or influence changes to land use or placemaking, such that additional requirements for connections or active transport corridors are triggered by the proposed modification

Since 2011, five additional connections to the shared path have been facilitated with two connections currently under construction in the Blacktown LGA. When considering the integration of additional shared path connections, the following constraints must be considered:

- Private land use adjoining the Westlink M7
- Spacing between existing connections
- Hinchinbrook and Cabramatta Creeks that run adjacent to the Westlink M7.

Requests for shared path additions from Council can be facilitated at Council's cost and subject to a road safety audit. These can be considered separately to the proposed modification. The proposed widening would not preclude additions or upgrades to the shared path. *Future Transport* (Transport 2022a) commits Transport to develop an Active Transport Strategy to guide communities, councils, and industry plan and invest in walking and cycling infrastructure across the state. Transport for NSW under the Get NSW Active grants program, encourages Councils to plan ahead, develop a program of works and consider different funding options for proposed projects. The Get NSW Active's strategic objectives are aimed at:

- improving bike riding to and within centres, neighbourhoods and to key destinations
- improving walkability in centres, neighbourhoods and at key destinations, and
- enabling vibrant centres and liveable neighbourhoods through the creation of street environments that prioritise walking and cycling.

This approach enables Transport to progressively plan and expand networks and support councils to develop a sustainable forward program of walking and cycling projects that provides tangible benefits for our communities and customers.

Climate change

Issue description

It is noted that whilst the proposal acknowledges increasing traffic, there is no direct consideration of climate and the requirement to curb emissions.

It is to be noted that the proposal entails significant vegetation clearing and only includes biodiversity offsets to balance these losses. There is no discussion of tree and vegetation planting close by the proposed upgrade nor consideration of potential for increases in urban heat.

Considerations such as reduced carbon emissions, improved construction practices, integrated water cycle management and the delivery of greenery to address urban heat, create air filtering and buffer zones for residents and wildlife, need to be incorporated into the proposed modification.

In order to progress the Premier's Priority of Greening our city commitment … the proposal should incorporate extensive tree-planting along the road corridor.

To help achieve the NSW Government's objective of a 50% cut in emissions by 2030, a new "Urban Heat" driven approach to design is required. This major arterial upgrade should:

- Explore designs that reduce areas of pavement exposed to sunlight
- Incorporate the use of extensive areas of tree canopy, integrated with water cycle management, to reduce urban heat and enhance cooling
- Focus on tendering that requires use of the lowest embodies emissions construction materials and recycled materials wherever possible

- Include charging/ fuelling infrastructure for low emission energy e.g. hydrogen fuelling stations and electric vehicle battery charging or swap-over stations that accommodate heavy, light commercial and passenger vehicles.

Response

A climate change and greenhouse gas impact assessment has been presented in Appendix N of the Modification Report. Mitigation measures GG1 to GG8 reflect Transport's desire to integrate carbon low and neutral and environmentally friendly initiatives into the proposed modification. These include reducing greenhouse gas emissions through electricity procurement, construction practices, and use of specially selected construction materials. Additionally, lower congestion as a result of the proposed modification may contribute to lower emissions per car per kilometre travelled.

The climate change and greenhouse gas impact assessment investigated the risk of an increase in paved surfaces exacerbating urban heat island effects, resulting in a cumulative increase in local average temperatures. Whilst the assessment concluded the effect in 2030 would be unlikely to occur, and minor in impact, the following mitigation measures to reduce urban heat island effects will be implemented:

- Existing mitigation measure CC05 – Appropriate landscape design will consider future climate impacts relating to drought (i.e. tolerant species) to provide ongoing shading along the operational footprint of the proposed modification
- New mitigation measure CC11 - Options to minimise the urban heat island effect will be explored during detailed design (e.g. through vegetation, consideration of materials, surfaces and finishes).

Hydrogen fuelling stations and electric vehicle battery charging are not proposed as part of the proposed modification as no stopping points have been included in the alignment other than emergency stopping bays, due to the proposed widening to occur into the median, inside lanes of Westlink M7.

Noise impacts during operation

Issue description

It is noted that there is strong emphasis on construction impacts in terms of noise however there is limited input on operational noise impacts to residents around the Westlink M7 transport corridor. The Noise and Vibrational report must explore operational impacts and mitigation measures on nearby residents in greater detail.

Response

Section 5 of Appendix E (Technical working paper: Noise and vibration) provides a detailed assessment of the operational noise and vibration impacts of the proposed modification. The report was written in accordance with applicable policy documents including (refer Section 3.0 of Appendix E for full list):

- NSW Road Noise Policy (RNP) (DECCW, 2011)
- *Noise Criteria Guideline* (Roads and Maritime Services, 2015a)
- *Noise Mitigation Guideline* (NMG) (Roads and Maritime Services, 2015b)
- Environmental Noise Management Manual (Roads and Maritime Services, 2001
- Procedure for Preparing an Operational Noise and Vibration Assessment (Roads and Maritime Services, 2011a)
- Draft At-Receiver Treatment Guideline (ARTG) (Roads and Maritime Services, 2017)
- Noise Policy for Industry (NSW Environment Protection Authority (NSW EPA), 2017).

The operational noise assessment compared road traffic noise levels predicted due to the proposed modification in 2026 (modelled as the year 'at opening') and 2036 (modelled as 10 years after opening), with those predicted without the proposed modification (but assuming background traffic growth based on traffic forecast for 2026 and 2036).

During the operational noise modelling, exceedances of the applicable noise criteria were identified. These exceedances were generally generated by existing high noise levels due to operation of the existing Westlink M7 (i.e. not due to the proposed modification itself). Where road traffic noise levels at sensitive receivers are predicted to be above the *Noise Criteria Guideline* (Roads and Maritime, 2015b) criteria, the requirement for additional noise mitigation is determined using guidance from the Roads and Maritime NMG (Roads and Maritime, 2015a) and based on existing land use. It is important to note that the noise exceedance levels are based on existing noise levels taken during the development of the proposed modification.

Potential noise management measures include (in order of preference outlined in the RNP (DECCW, 2011):

- Quieter road pavement surfaces
- Noise mounds
- Noise barriers

- At-property treatments.

Noise impacts resulting from and directly associated with the proposed modification were considered for appropriate noise mitigation. The assessment concluded that following the implementation of noise walls (refer Table 5-3 of Appendix E), 250 noise sensitive receivers would be eligible for the consideration of feasible and reasonable noise mitigation measures. (see Figure 7-16 to Figure 7-26 in Modification Report).

The Noise Mitigation Guideline advises that noise walls should be considered where there are four or more closely spaced receivers. Residences are generally considered closely spaced where the facades are separated by less than 20 metres. In addition, design factors, such as cost to benefit ratio, constructability, and overhead power line clearance may result in these barriers being considered unfeasible and/or unreasonable.

In addition, other considerations from a community perspective may include:

- Potential visual or urban design impacts
- Potential overshadowing impacts
- Potential community safety/crime prevention considerations such as isolated walkways
- Form of future development in the area
- Preferences of the local community as identified during community consultation.

The assessment identified a noise barrier adjacent to Adna Street as potentially reasonable in the Blacktown LGA. Preferred noise mitigation options (low noise pavement, noise barrier, architectural treatments or a combination) would be determined during detailed design taking into account whole-of-life engineering considerations and the overall social, economic and environmental benefits. The preference would be given to noise mitigation measures that reduce outdoor noise levels and the number of at-property treatments required.

As per mitigation measure NV18, operational traffic noise will be monitored at sensitive receivers between six months and one year after opening. The “actual” measured noise levels would be compared to the predicted levels from the noise and vibration assessment report and may lead to an increased level of treatment, in which case Transport would notify the property owner and arrange for the increased level of treatment.

Social impacts

Issue description

The Social Impact Assessment prepared by AECOM Australia Pty Ltd fails to meet the Department's requirements for the preparation of Social Impact Assessments. The Department’s new SIA Guidelines require all State Significant Development’s and State Significant Infrastructure proposals to engage in a clear and consistent approach to SIA preparation. The guidelines require SIA to be developed in accordance with the Department’s framework for either a Social Impact Management Plan (SIMP) or clear, conditionable mitigations to be identified. Furthermore, the SIA provided in respect of the proposed modification:

(1) Does not capture the compounding operational impacts of the development

(2) Uses misleading demographic statistics to develop its recommendations

(3) Is inadequate and misleading, it lacks rigour and credibility. The widening proposal should not and cannot be assessed without a comprehensive SIA. A new report is required.

Specific areas of concern included:

(4) Generalised use of LGA-wide SEIFA and IER ratings rather than ratings for the social locality defined in Section 4 of the SIA. The report is misleading in its description of that part of the social locality in the Blacktown LGA.

(5) A focus on impact during construction and an inadequate assessment of ongoing operational impacts. It is evident there will be social impacts during construction that will need to be mitigated during that period. It provides far less analysis or identification of potential ongoing operational impacts on traffic, amenity and cohesion. It is to be noted that these were identified in the SEARs consultation process.

(6) Failure to consult with Councils as key stakeholders, as required by SEARs. The consultation process appears to have been severely truncated and consisted of a random sample of selected sections of some communities. This limited consultation excluded stakeholders including Councils, schools, major retail, and State Government agencies.

(7) Failure to directly address concerns raised by the community in the limited consultation that did occur. The SIA reports benefits and concerns raise by community in the consultation, particularly in relation to the operational phase, but does not address these or provide mitigation strategies.

Key operational impacts need to be addressed, including:

(8) Increased traffic volume. Whilst the SIA rightly observes the benefits of increased traffic flow on the Westlink M7, it provides no analysis of the capacity of the surrounding road system to cope with an increased traffic flow

(9) Active transport connections and movements across road reserve. … Non-vehicle crossings are primary associated with the shared path and are spaced at substantial intervals. Council is seeking to add a pedestrian pathway to a creek crossing to provide an underpass near Blacktown International Sports Park. The lack of permeation presents significant barriers to community connection and cohesion and should be addressed in the SIA

(10) Upgrade of shared path. The lack of greening and trees, together with the projected increase in days over 35 degrees in western Sydney will result in a general heating of this path. The SIA should address this effect and the community value identified in the 'Parks and landscape features', by considering installation of water stations and shaded rest areas

(11) Noise and air quality. The SIA notes the potential health impacts of poor air quality – respiratory health issues, asthma, allergies – and noise – sleep disturbance, annoyance, children's school performance and cardiovascular health. The SIA addresses these factors during construction, both will continue to be significant impacts during operation

(12) Toll charges. Any increase in tolling of roads in western Sydney would increase the burden on the highest tolled population grouping in the country. The already-high rates of social disadvantage and poverty in the area would severely impact the communities along the M7 corridor.

Response

The SIA (Appendix M of the Modification Report) was prepared in accordance with *The Social Impact Assessment Guideline for State Significant Projects* (DPIE, 2021b) (the 'SIA guideline'), and entirely constructed around the eight social impact categories listed in section 4.3 of the SIA guideline, including the preparation of the SIA-specific consultation activities. It is important to note that the proposed modification is to allow for the widening of an existing motorway that has been in operation for nearly 20 years. The nature of impacts associated with the construction would be short-term and temporary and that operational impacts of the widened Westlink M7 were assessed as being incremental. The approach to SIA was in line with this context, seeking to apply a level of assessment commensurate with the potential social risk of the proposed modification. As such the SIA sought to focus upon the relevant aspects of the SIA guideline, noting that the guideline itself states that the approach should be tailored for each project and its social environment.

Section 4.10 of the SIA guideline states that the SIA should 'provide a basis for developing a social impact management plan, where required.' The technical supplement to the guideline provides further clarification regarding the development of mitigation measures, particularly Table 8 in Section 3.1. Mitigation measures were developed for this project with a view to the likely impacts of the proposal, as well as the requirements of the guideline and the technical supplement. The measures proposed are consistent with the factors outlined in Table 8 of the technical supplement and are clear and conditionable.

The need for a social impact management plan (SIMP) was considered in detail by the SIA team as part of the development of the report and mitigation measures. Ultimately, clear, conditionable mitigation measures were created (see Appendix B of the Modification Report) and a SIMP was not deemed to be necessary or suitable on the basis that:

- The impacts with the greatest social impact consequence would be those in the construction phase, for which detailed management planning is already proposed for all factors likely to affect local amenity (traffic, air quality, noise and vibration, land use and property and landscape and visual amenity). In addition to this, a detailed community and stakeholder engagement plan is proposed to be implemented during construction that would provide for two-way communication between the community and the proponent
- Social impacts during operation, while important, are largely incremental and consistent with those already present due to the operation of the existing motorway. Any additional incremental impacts from the proposed widening were considered to be adequately addressed by measures proposed in topic-specific assessments such as noise and vibration or air quality
- The effectiveness of a SIMP relies on the ability to understand and adapt actions in response to project-induced social changes over time in order to avoid or reduce social impacts. As outlined above, the specific social impacts of the proposed widening are not expected to be of a scale or type in their own right that would justify or require the implementation of long-term management planning.

The following numbered responses correlate to the numbered issues above under the social planning concerns subheading.

(1) The social impacts of the operational project have been discussed in Section 8.0 of the Social Impact Assessment Report (Appendix M of the Modification Report). These impacts draw upon other relevant contributing elements of the impact assessment (such as traffic, air quality, noise and vibration, land use and property and landscape and visual amenity), and also consider social impacts not directly linked to direct amenity factors, as required by the DPIE guideline. This includes consideration of cumulative impacts alongside other projects.

As outlined in the response above, operational social impacts arising from the proposed widening were considered to be largely incremental and consistent with those already present due to the operation of the existing motorway.

It is noted that social impacts should not be considered solely in isolation, and the interaction between individual impacts should be understood. In this case, as outlined above, the degree of individual operational impacts was deemed to be effectively incremental and as such the interaction and combined effect of these on people living near or utilising the Westlink M7 would be very minor and offset by clear benefits associated with the project including the reduction in congestion and the further stimulation of economic activity and connectivity throughout the corridor.

(2) The SIA report has been prepared with close view to the requirements of the DPIE SIA guideline, the SEARs and Transport's commitment to appropriately managing adverse impacts and enhancing positive impacts where feasible. The report is based upon accepted social science practices and methodologies and is consistent with the level of detail provided for similar large transport projects in NSW.

(3) Refer to response 2.

(4) The SIA report clearly acknowledges the degree of disadvantage present along the Westlink M7 corridor. This is considered at various locations within the report and was a prominent feature of the SIA-specific consultation activities, which specifically consulted disadvantaged communities along the corridor for their view of the proposed widening.

The presentation of SEIFA and IER ratings within the SIE report was presented on the basis of LGAs, due to the manner in which data was able to be obtained and to avoid overburdening the report with the large volumes of data that would be necessary to characterise the existing social environment at a fine-grained level. While it is recognised that this section potentially does not fully outline the very wide amplitude of social advantage present within the Blacktown LGA, the severe disadvantage of certain communities along the alignment was a focus throughout the preparation of the report.

(5) As outlined above the degree of individual operational impacts on the existing social environment was deemed to be incremental. This is due to the motorway having been operational for 20 years and the social effects within the community, such as barrier and amenity effects, being well established and accounted for in the existing social baseline. The additional impacts associated with the operation of the widened motorway were considered proportionately and in accordance with the requirements of the DPIE SIA guideline.

(6) The SIA undertook detailed SIA-specific consultation employing four teams of people to interview and discuss the proposed widening with the most affected people in the community. The people likely to be affected by the proposal were selected based upon the locational extent of the likely amenity impacts as outlined by other technical assessments (e.g. noise and air quality). However, people not directly affected, but who may use the motorway, were also consulted. This included people at a distance from the project.

Consultation with local councils (Blacktown, Fairfield, and Liverpool) and State government agencies was undertaken through general project consultation, any feedback from which was considered during the development of the SIA report. Schools, as one of a long list of affected social infrastructure along the alignment, were not specifically consulted on the basis of limited direct impacts to their operations.

(7) Refer to response 6. Further, people's views, as expressed directly during the consultation program, have been a key consideration of the development of the SIA and mitigation measures in Appendix B of this report. Respondent's views, particularly around amenity impacts such as air quality, traffic, noise, and visual impacts have been analysed and understood, and as outlined in Section 9.2 of the SIA, measures should be read in conjunction with those mitigation measures proposed for noise and vibration, air quality, traffic and transport, and landscape and visual impacts (refer Appendix B of this report). Noting the limited construction footprint of the proposed modification outside the existing Westlink M7 alignment, and that that the social impacts identified by the community and reflected in the SIA are generally amenity related, it is considered that the mitigation measures in various other parts of the Modification Report are highly applicable and adequate in addressing the social impacts of the proposed modification.

(8) This is addressed in Appendix D (Traffic and Transport assessment) and Section 7.1 of the Modification Report.

(9) Whilst there are currently 19 shared path connections within the Blacktown LGA, including 10 east-west connections across the Westlink M7, it is recognised that the barrier effect of the existing Westlink M7 is well established and has been in effect for 20 years. The division of communities and impedance of access for people of varying ages, abilities and backgrounds, and their access to work, services and social infrastructure is a feature of the existing development, with the impact of the proposed widening in this regard being extremely minor. The existing barrier effect of the motorway is captured within the social baseline, with the additional impacts of the proposed modification assessed accordingly. Whilst it is acknowledged that the scope of SIA should not necessarily be restricted to new impacts only, the scale of any such improvements (such as

new bridges or underpasses) exceeds the scope of, and is not consistent with, the overall objectives of the proposed modification. Furthermore, the following constraints exist for additional shared path connections:

- Private land use adjoining the Westlink M7 limits the space available for future connections
- Spacing between existing connections
- Hinchinbrook and Cabramatta Creeks run adjacent to the Westlink M7.

Albeit there have been five additional connections to the Shared Path since 2011. Currently, two additional connections are under construction within the Blacktown LGA: a connection near WSO office with the Light Horse Business Hub, and the Mavis Street connection to Blacktown International Sports Centre.

(10) It is acknowledged that within the context of a warming climate, Western Sydney is anticipated to experience an increase in the intensity and duration of hot weather. The SIA has been prepared cognisant of the ongoing and accelerating impacts of climate change on local communities, including potential impacts such as those on users of the Westlink M7 shared path. However, as outlined above, the scope of the proposed modification is focused on the addition of a new trafficable lane in each direction on the existing motorway. The scope of the project does not currently extend to upgrades to the shared path, and as such improvements such as those suggested were not proposed within the SIA. The *Future Transport Strategy* (Transport, 2022a) commits Transport to develop an Active Transport Strategy to guide communities, councils, and industry plan and invest in walking and cycling infrastructure across the state. Transport under the Get NSW Active grants program, encourages councils to plan ahead, develop a program of works and consider different funding options for proposed projects such as the installation of water stations and shaded rest areas.

(11) The SIA report has been prepared with view to the results of other relevant technical assessment undertaken on behalf of the proposed modification, including operational air quality and noise and vibration impacts. These technical assessments detail the existing baseline scenario for both factors and assess impacts that would result from the construction and operation of the proposed modification. For noise this concludes that operational impacts to existing sensitive receivers would be adequately managed through the implementation of noise management measures such as new noise barriers and acoustic treatments where required. The noise and vibration technical assessment, available as Appendix E to the Modification Report, outlines that new noise barriers would be proposed adjacent to existing noise barriers at Elizabeth Hills and Plumpton, subject to them being demonstrated to be reasonable and feasible. The Air Quality Technical Assessment, available as Appendix F to the Modification Report, outlines the scale and severity of potential air quality impacts associated with the operational project. The assessment found that there is potential for negligible to small increases in pollutant concentrations for some sensitive receivers surrounding the proposed modification, however the general impact across the airshed would be expected to be broadly balanced with some areas experiencing decreases in pollutant concentration.

The SIA report presents these findings in a manner proportionate to their relative incremental impact over the existing environmental baseline. Thus, given that the operation of the proposed modification would not significantly increase the degree of air quality, noise and vibration impacts that are currently observed in baseline scenarios (once mitigation measures are in place), assessment of potential impacts to health due to poor air quality and noise was not deemed necessary.

The SIA notes the potential health impacts of poor air quality (respiratory health issues, asthma, allergies), and noise (sleep disturbance, annoyance, children's school performance and cardiovascular health). The SIA addresses these factors during construction, both will continue to be significant impacts during operation"

(12) Tolls have been considered within Sections 7.6 and 8.6 of the SIA. Survey results highlighted that a rise in toll price when the construction of the Westlink M7 is complete was a concern for businesses and residents alike. Changes to the tolling arrangements currently in place are not being proposed. In order to avoid increased tolling on the Westlink M7, a range of options for funding the proposed modification are being investigated and would be confirmed once costs are ascertained through a procurement process for delivery of the proposed modification.

6.11 Western Sydney Airport

This section provides an overview of the comments made by Western Sydney Airport. A copy of the full submission is provided in Appendix D.

Strategic need for the proposed modification

Issue description

It is also noted that the proposed modification is anticipated to commence construction from 2023, with target completion by 2025. This would align with the opening of the M12 Motorway and commencement of passenger services at WSI. This is supported as it will mitigate construction impacts on WSI traffic in the initial years of

operation. However, with overlapping programs, delivery should not be at the expense of ensuring completion of the M12 Motorway as a priority, nor the M12 direct connectivity to suburbs east of the Westlink M7.

Response

The timing of construction of the M12 Motorway project is not expected to be compromised by the construction of the proposed modification. The construction program for the interchange of the proposed modification with the M12 Motorway has been considered in the development of the program for the proposed modification. Subject to construction planning, it is proposed that the interchange works for the M12 East project be constructed at the same time by the same design and construct contractor. This would provide significant advantages compared to delivering these works separately, including minimising disruption and potential construction fatigue associated with consecutive construction, as well as achieve efficiencies during construction (refer Section 4.3.13 of the Modification Report for further information).

Wildlife attraction

Issue description

Where possible, Western Sydney Airport needs to minimise the potential aviation safety risk from increased wildlife attraction, notably birdstrike to landing and departing aircraft. A significant portion of the proposed modification footprint is within the 8 to 13-kilometre wildlife buffer zone of Western Sydney Airport, as prescribed by *State Environmental Planning Policy (Precincts – Western Parkland City) 2021* (WPC SEPP).

Noting that the proposal includes the provision of substantial landscaping, the planting species proposed should be considered in the context of wildlife attraction / aviation risk and replaced with alternatives where increased risk is likely. High risk species indicatively proposed at Table 8 in the Urban Design, Landscape and Visual Impact Assessment (Appendix K) include the following:

- Allocasuarina torulosa
- *Eucalyptus* (various types)
- Acacia parramattensis.

A number of other tree species proposed that would need to be mitigated (through maintenance, spacing of planting, use as feature trees, or other measures) in order to have an appropriate wildlife attraction impact include:

- Casuarina glauca
- Banksia spinulosa
- Bursaria spinosa
- Meleleuca linariifolia ‘Snowstorm’
- Acacia falcata
- Acacia longifolia
- Angophora floribunda.

Further assessment of landscaping choices of the proposal by a wildlife hazard risk consultant would help to confirm the wildlife attraction risk of the proposed modification. Western Sydney Airport would be willing to work with Transport through this process, if required. Direction could also be gained from the M12 Motorway team, which has carefully considered this issue in the design of the M12 Motorway.

Western Sydney Airport therefore recommends that a review of wildlife species is undertaken in the proposed modification area situated within/below the obstacle limitation surface zone, including direction from the M12 Motorway team in relation to wildlife species selection.

Response

Potential risk of wildlife strike is discussed in Section 7.17 (Hazards and risk) of the Modification Report. During detailed design, appropriate measures to reduce the likelihood of attracting wildlife would be explored.

Mitigation measure HR5 in the Modification Report includes:

- Design of water treatment basin upgrades (if required) and species selection for landscaping plants/ trees will consider wildlife hazard (e.g. *attracting* birds), in relation to motorway use and the Western Sydney Airport. This includes the requirements of the National Airports Safeguarding Framework (National Airports Safeguarding Advisory Group, n.d.), and specific requirements of the Aerotropolis SEPP (Western Sydney Aerotropolis) 2020 and Aerotropolis Development Control Plan.

It is acknowledged that some species proposed in the Urban Design, Landscape and Visual Impact Assessment (Appendix K of the Modification Report) are considered high risk species as well as other proposed species requiring suitable mitigation to ensure an appropriate wildlife attraction impact. Consultation would occur with Transport’s M12 Motorway team in relation to wildlife species selection.

On-ramp / Off-ramp capacity

Issue description

Within the Traffic and Transport Assessment, a number of key roads that interface with the motorway are identified as having a poor Level of Service performance either with or without the proposed modification, including:

- Bernera Road/ Yarrawa Street Westlink M7 ramps
- Cowpasture Road Westlink M7 ramps
- The Horsley Drive/ Wallgrove Road Westlink M7 ramps
- Old Wallgrove Road/ Wallgrove Road Westlink M7 ramps.

Western Sydney Airport notes that these intersections will need to be upgraded in order to deliver the full benefits of these roads. Upgrade of these intersections need to also consider cumulative impacts of additional traffic in the area resulting from other projects, particularly those associated with the Western Sydney Aerotropolis.

Response

As detailed in Section 7.1 (Traffic and transport) of the Modification Report, the traffic modelling undertaken found that most intersections would continue to operate with the same LoS in both 2026 and 2036 with or without the proposed modification. However the LoS at the following seven intersections would decline from a satisfactory level (LoS A to D) to an unsatisfactory level (LoS E or F) with the proposed modification:

- AM peak
  - Bernera Road/Yarrawa Street/M7 exit ramp/M7entry ramp
  - Old Wallgrove Road/Wallgrove Road/M7 entry ramp/M7 exit ramp
  - Rooty Hill Road North/M7 exit ramp
- PM peak
  - Cowpasture Road/M7 exit ramp/M7 entry ramp
  - The Horsley Drive/Wallgrove Road/M7 entry Ramp/M7 exit ramp
  - Great Western Highway/Rooty Hill Road South/Wallgrove Road
  - Rooty Hill Road North/M7 exit ramp
  - Rooty Hill Road North/Richmond Road/M7 entry ramp/M7 exit ramp.

Five of these seven intersections would also operate with an unsatisfactory LoS in either the AM or PM peak hours in 2026 and/or 2036 without the proposed modification.

The proposed modification would bring forward the need to consider solutions for these areas to cater for forecast increases in traffic volumes associated with population and employment growth and to a lesser degree the proposed modification. Mitigation measure T6 requires that solutions should be investigated to cater for forecast traffic volumes associated with population and employment growth and to some degree the proposed modification, at the following intersection locations:

- Bernera Road
- Cowpasture Road
- The Horsley Drive
- Great Western Highway
- Old Wallgrove
- Rooty Hill Road
- Richmond Road.

Road connectivity and capacity to support the Western Sydney Aerotropolis, Southwest Growth Centre, Northwest Growth Centre and other planned employment precincts would be a function delivered by a combination of the motorway, arterial road, the local road network and public transport options. These projects would be prioritised for delivery in alignment with Transport for NSW Future Transport Strategy and other NSW Government Strategies.

Pedestrian and cyclist management plan

Issue description

Western Sydney Airport requests to be included in any consultation that occurs for the Pedestrian and Cyclist Management Plan.

Response

As noted in Section 6.5 of the Modification Report, should the proposed modification be approved, continued consultation would take place with key stakeholders and the community during planning and prior to the commencement of any construction activities. Transport can consult with Western Sydney Airport in the preparation of the Active Transport Strategy (required under mitigation measure T4).

7. Updated project justification and conclusion

7.1 Strategic context and statutory considerations

As described in Chapter 3 (Need and strategic context) the Modification Report, the Westlink M7 is an existing major road infrastructure corridor on Greater Sydney's orbital motorway network and has a key role in providing connections to both existing and future transport infrastructure. The Westlink M7 is also one of Greater Sydney's key freight corridors. Upgrading infrastructure, including roads, is vital to ensure that Greater Sydney's transport system is able to cope with the growth of its population and the need to travel between different areas of Greater Sydney. Plans such as *Greater Sydney Region Plan: A Metropolis of Three Cities – connecting people* (Greater Sydney Commission, 2018a), *Future Transport Strategy* (Transport, 2022a) and the *State Infrastructure Strategy 2018-2038 – Building Momentum* (Infrastructure NSW, 2018) and its update *State Infrastructure Strategy 2022-2042 – Staying Ahead* (Infrastructure NSW, 2022) identify that upgrading transport infrastructure assists in facilitating the objectives and outcomes of those plans. Increasing the road capacity of this key north-south motorway, in collaboration with key stakeholders described in this Submissions Report and the Modification Report, would support the objectives of the strategic metropolitan and transport documents shaping Sydney's growth. This would also accommodate increased traffic on the Westlink M7 expected from the new Western Sydney International Airport via the M12 Motorway.

The statutory requirements of the proposed modification (as described in Chapter 5 of the Modification Report) have not changed as a result of the responses to submissions.

The additional assessment and additional/updated mitigation measures would assist the proposed modification to achieve its objective to 'avoid and minimise impacts on the road network, the community and environment during construction'.

The responses to submissions would not alter the proposed changes to the Conditions of Approval as described in Chapter 8 of the Modification Report. Transport will comply with the Conditions of Approval issued by DPE should the proposed modification be approved, and the mitigation measures stated in the Modification Report and this Submissions Report (refer to Appendix B) will form part of the Conditions of Approval.

The responses to submissions/advice received and the subsequent additional assessment and additional mitigation measures proposed do not change the need, objectives or benefits of the proposed modification, and would assist in minimising impacts.

7.2 Environmental and social considerations

Agency advice has led to additional impact assessment and mitigation measures beyond that presented in the Modification Report. For instance, Transport's response to Heritage NSW advice has resulted in additional heritage impact assessment and additional and revised mitigation measures that would lead to environmental and community impacts being minimised.

An addendum to the SOHI for the Upper Canal System (SHR 01373) was prepared as per Heritage NSW's request (see Appendix F), in order to assess the potential for impact to the timber beams associated with the Shaft No. 4 of the heritage listed Upper Canal System. The addendum found that the timber beams are considered to be of Moderate significance, as they relate to the later closing of the shaft. The construction vibration assessment Technical Report (AECOM, 2022) outlined safe operating distance for heritage items to minimise indirect (vibration) impacts. Based on the approximate distance from the proposed construction works to the both the top of the original shaft, and to the timber beams below, safe operation procedures would need to be enacted during construction to ensure vibration impacts are avoided. The additional mitigation measure outlined in the addendum are included within this Submissions Report as the newly added mitigation measure H5, which will assist in avoiding any indirect impacts to the structures associated with this heritage listed item. This states that any proposed changes to the design or construction methodology in the vicinity of Shaft No.4 will be reviewed by a suitably qualified heritage specialist to assess any changes to potential indirect vibration impacts.

The proposed additional field surveys for the Southern Myotis will be performed as per DPE Environment and Heritage Groups (EHG) request, during the survey period October to March, in order to adhere to the EHG survey guidelines for species credit threatened bats and their habitats. The proposed additional surveys will inform the preparation of Microbat Management Plan that would outline measures to protect this threatened species of Microbat.

In order to reduce surface water impacts, including in areas of moderate to high potential for contaminated soils, two mitigation measures have been revised: SW1 and SW9 (see Appendix B). The updated mitigation measures will further reduce the proposed modification's potential to impact surface water quality.

Mitigation measure H4 has been amended in response to Water NSW advice to capture an additional relevant guideline for work adjacent to the Upper Canal System.

Mitigation measure HR5 has been revised to include reference to the Aerotropolis SEPP (Western Sydney Aerotropolis) 2020 and Aerotropolis Development Control Plan.

Mitigation measure CC11 has been added in response to NSW Health advice so that options for minimising urban heat island effects are considered.

Finally, mitigation measure AH7 has also been added, as a result of further consultation Transport have undertaken with the Aboriginal community. This measure will provide opportunity to further incorporate Aboriginal heritage values within the proposed modification.

The new and updated mitigation measures are presented in Appendix B.

Response to community submissions

This section provides an overview on how community submissions, including local councils and special interest groups, have affected the impact assessment and mitigation measures presented in the Modification Report.

A variety of infrastructure was requested to be included within the design of the proposed modification, including new entries and exits to the mainline, new shared use path connections, and additional lanes. Regarding the shared use path, mitigation measure SW12 has been added, as a response to community submissions and requests by Liverpool City Council regarding flooding and drainage issues along shared use paths. The updated mitigation measure will investigate ways to improve the flood immunity of the shared path near Ash Road, Prestons (see Appendix B – Updated environmental mitigation measures).

Ecologically sustainable development

This Submissions Report, and its updated review of impacts and associated safeguards, has been prepared with consideration of the principles of ecologically sustainable development (ESD) in accordance with the EP&A Regulation. The principles, as listed in clause 7(4) of Schedule 2 of the EP&A Regulation, are presented in Table 7-1.

Table 7-1 Principles of ESD

Principle	Consistency of the proposed modification
The precautionary principle. The precautionary principle deals with certainty in environmental and technical decision-making. It provides that where there is a threat of serious or irreversible environmental damage, the absence of full scientific certainty should not be used as a reason to postpone measures to prevent environmental degradation.	This Submissions Report was prepared adopting a conservative approach, which includes an assessment of the worst-case impacts and scenarios.
Inter-generational equity. Inter-generational equity requires that the present generation pass onto the next generation an environment that does not limit the ability of those future generations to attain a quality of life at least equal to that of the current generation.	The proposed modification would provide for a future level of service along the Westlink M7 that previous generations have enjoyed, as well as maintaining the shared path into the future, whilst also protecting heritage and biodiversity values for future generations. The proposed modification may also impact on inter-generational equity through the consumption of fuel resources and contributing to the decline of available fuel resources. However, the proposed modification would also result in improved vehicle fuel efficiency. The updates to the mitigation measures as part of this Submissions Report will not change this.

Principle	Consistency of the proposed modification
Conservation of biological diversity and ecological integrity. Biological diversity relates to the breadth and variety of life. Ecological integrity refers to maintenance of the relationships, dependencies and services supplied by all lifeforms and the physiochemical environment to each other. The conservation of these elements is critical to the proper functioning of natural environments and the biosphere in general. This principle asks that conservation of biological diversity and ecological integrity should be a fundamental consideration for a project.	The design and assessment of the proposed modification has been undertaken with the aim of identifying, avoiding, minimising, and mitigating impacts to biodiversity and ecological integrity. Consistent with the Biodiversity Conservation Act 2016 and the SEARs, a biodiversity offset strategy has been developed to compensate for the unavoidable loss of ecological values as a result of the proposed modification. The updates to the mitigation measures as part of this Submissions Report will not change this.
Improved valuation and pricing of environmental resources. This ESD principle is premised on an assumption that all resources should be appropriately valued and that the value of environmental resources should be considered alongside any economic or cost benefit analysis for the life of the Project.	The value placed on avoiding and minimising environmental impacts is demonstrated in the design features incorporated into the proposed modification. The cost of mitigation measures, including biodiversity offsets and noise mitigation measures, has been incorporated into the cost of the proposed modification, as well as the extent of investigations undertaken to inform the Modification Report. The updates to the mitigation measures as part of this Submissions Report will not change this.

7.3 Uncertainties and resolution

Uncertainties of the proposed modification and approach to design requirements were presented in Section 9.5 of the Modification Report. No further uncertainties were identified during the preparation of this Submissions Report.

7.4 Conclusion

The proposed modification is necessary to provide additional capacity on the Westlink M7 to meet future traffic growth, reduce congestion and improve connectivity and reliability in the region. Without the proposed modification, the network would progressively become more congested in 2026 and 2036 primarily due to urban population and traffic growth. The network performance of the Westlink M7 within the study area would substantially improve with the proposed modification in both 2026 and 2036.

Responses to submissions have resulted in an additional addendum SOHI and additional/ updated mitigation measures, which would further minimise impacts to the environment and community. Additional microbat surveys were requested as part of the advice received by agencies; this was presented in the original mitigation measures (see measure B3) and is now proposed to be undertaken in November 2022. The continued development, detailed design and delivery of the proposed modification would continue to manage and mitigate impacts so that they are able to be controlled to acceptable levels.

Transport and DPE will inform the community and stakeholders when a decision has been made on the approval of the modification application. Should the proposed modification be approved, continued consultation would take place with the community and key stakeholders during the planning of and prior to the commencement of any construction activities. Subject to approval and prior to construction commencing for the proposed modification, Transport would notify and consult with key stakeholders on the proposed construction timeframes, construction activities and detailed design.

The proposed modification remains consistent with the objectives of the proposed development, and is consistent with, or does not preclude a number of strategic plans for transport (such as Future Transport Strategy (Transport, 2022a) and NSW Freight and Ports Strategy (Transport, 2013)), development and freight that have been prepared at a national, State and regional level.

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Appendix A – Submissions register

Submissions register

Group	Submitter ID	Submission number	Name	Section number where issues raised are addressed
Community	S-46906473	SE-46906474	Mark Saidden	6.1.6, 6.2.1,
Community	S-47065956	SE-47065957	Robert Thomsett	6.3.2
Community	S-47074959	SE-47074960	Graham Paul	6.1.3, 6.1.6, 6.3.2
Community	S-47131706	SE-47131707	Withheld	6.1.6, 6.3.1, 6.3.2
Community	S-47155961	SE-47155962	John Kelman	6.1.2
Community	S-47181472	SE-47181473	Withheld	6.1.2 and 6.4.1
Community	S-47207990	SE-47207991	James Pugh	6.1.6, 6.3.2
Community	S-47343706	SE-47343707	Con Kollios	6.1.4
Community	S-47380710	SE-47380711	Francesco Vartuli	6.1.1, 6.1.3, 6.3.1, 6.3.2
Community	S-47389469	SE-47389470	Withheld	6.5.2, 6.6.2
Community	S-47396973	SE-47396974	Withheld	6.5.2, 6.6.2
Community	S-47397457	SE-47397458	Withheld	6.7.1
Community	S-47439737	SE-47439738	Withheld	6.1.6, 6.3.1, 6.3.2
Community	S-47441486	SE-47441487	Withheld	6.5.2, 6.6.2
Community	S-47441972	SE-47441973	Samuel Page	6.3.2
Community	S-47446961	SE-47446962	Withheld	6.1.1, 6.3.2
Community	S-47466467	SE-47466468	Shafeel Ali	6.1.1
Special interest group	S-47534506	SE-47534507	Robert Kemp	6.1.2
Community	S-47536458	SE-47536459	Matthew Rodgers	6.1.1, 6.1.5, 6.3.2
Community	S-47541206	SE-47541207	Withheld	6.1.6, 6.3.2
Community	S-47605220	SE-47605221	Withheld	6.1.1, 6.3.2
Community	S-47614513	SE-47614514	David Sellen	6.6.1, 6.6.2
Community	S-47614513	SE-47616958	David Sellen	6.1.1, 6.5.1, 6.5.2
Community	S-47627966	SE-47627967	Lawrence White	6.6.2
Special interest group	S-47630456	SE-47630457	David Thomson	6.1.2, 6.2.1, 6.3.2, 6.4.1, 6.5.1
Community	S-47631217	SE-47631218	Brendan Terrert	6.3.2
Community	S-47632210	SE-47632211	Vicky Mittiga	6.6.2
Special interest group	S-47641214	SE-47641215	Sarah Bickford	6.1.2, 6.2.1, 6.3.2, 6.4.1

Group	Submitter ID	Submission number	Name	Section number where issues raised are addressed
Community	S-47658005	SE-47658006	Frank Rave	6.3.2
Community	S-47661462	SE-47661463	Rosetta Arena	6.6.2
Community	N/A	N/A	Fairfield City Council	6.9
Community	N/A	N/A	Blacktown City Council	6.8
Community	N/A	N/A	Liverpool City Council	6.10

Appendix B – Updated environmental management measures

The Modification Report identified a range of environmental mitigation measures that would be required to avoid or reduce the environmental impacts (see Appendix B of the Modification Report). After consideration of the issues raised in the public submissions, the environmental mitigation measures for the proposed modification have been updated, refer to Table B-1Table .

Should the proposed modification be approved, the updated environmental mitigation measures would apply. Text has been underlined where measures, or parts of measures, that are additional and/or revised from those provided in the Modification Report. Strikethrough formatting has been used to identify measures, or parts of measures, that are no longer required.

Table B-1: Updated compilation of environmental mitigation measures for the proposed modification

Impact	ID	Mitigation measure	Responsibility	Timing
Traffic and transport				
Construction related traffic	T1	A Construction Traffic and Access Management Plan (CTAMP) will be prepared as part of the Construction Environmental Management Plan (CEMP) in consultation with Transport, relevant local Councils, and relevant agencies and in accordance with relevant guidelines including consideration for: • Staggering shift times to minimise the hourly traffic generation • Encouraging the use of alternative transport modes, carpooling, measures that minimise traffic generation associated with worker arrival, departures, and movements between sites • Using shuttle buses to move workers between sites • Minimising road closures that would likely have large impacts to the network • Pedestrian and cyclist access management plan • Parking and access management plan.	Construction contractor	Construction
	T2	Temporary changes to bus routes and bus stops will be implemented in consultation with Transport, local Councils, and bus operators. These will consider measures to minimise impacts to buses such as delaying road closures to avoid bus detours, if possible.	Construction contractor	Detailed design Construction
	T3	Movements of haulage vehicles will be planned to minimise movements on the road network during the AM and PM peak periods where practicable.	Construction contractor	Detailed design Construction
	T4	An active transport strategy will be developed to document planned shared path detours and recommend upgrades to these facilities to safely accommodate shared path users.	Construction contractor Transport	Detailed design Construction
Operational capacity	T5	Potential impacts to vehicle speeds outside the proposed modification extents should be investigated.	Transport	Detailed design
	T6	Solutions should be investigated to cater for forecast traffic volumes associated with population and employment growth and to some degree the proposed modification, at the following locations: • Bernera Road • Cowpasture Road • The Horsley Drive • Great Western Highway • Old Wallgrove • Rooty Hill Road • Richmond Road.	Transport	Detailed design

Impact	ID	Mitigation measure	Responsibility	Timing
Noise				
Construction noise and vibration	NV1	A Construction Noise and Vibration Management Plan (CNVMP) will be prepared and include the following standard and specific actions and mitigation measures: • Identify relevant performance criteria in relation to noise and vibration • Identify noise and vibration sensitive receptors and features in the vicinity of the proposed modification • Include standard and additional mitigation measures from the *Construction Noise and Vibration Guideline (CNVG)* (Roads and Maritime Services, 2016b) and details about when each will be applied • Describe the process(es) that will be adopted for carrying out location and activity specific noise and vibration impact assessments to assist with the selection of appropriate mitigation measures • Consider cumulative construction noise impacts and construction noise fatigue • Include protocols that will be adopted to manage works required outside standard construction hours, in accordance with relevant guidelines including for management of respite periods • Detailed monitoring that will be carried out to confirm proposed modification performance in relation to noise and vibration performance criteria. The cumulative noise impacts of relevant nearby major projects should be further considered by the contractor when a detailed construction schedule becomes available for the proposed modification. Consultation should be undertaken with the relevant contractors to manage cumulative impacts on sensitive receivers within common areas. Feasible and reasonable mitigation measures should be detailed in the CNVMP at sensitive receivers and areas where construction fatigue could occur. Consultation with the affected community will also occur prior to and during construction.	Construction contractor	Prior to construction Construction
Community consultation and complaints handling	NV2	All residents affected by noise from the proposed modification which are expected to experience an exceedance of the construction noise management levels should be consulted about the proposed modification prior to the commencement of the particular activity, with the highest consideration given to those that are predicted to be most affected as a result of the works. The information provided to the residents should include: • Programmed times and locations of construction work • The hours of the proposed modification works • Construction noise and vibration impact predictions • Construction noise and vibration mitigation measures being implemented on site.	~~Transport~~ Construction contractor	~~Prior to construction~~ Construction

Impact	ID	Mitigation measure	Responsibility	Timing
		Community consultation regarding construction noise and vibration will be detailed in the Community and Stakeholder Engagement Plan for the construction of the proposed modification and will include a 24-hour hotline and complaints management process. Consultation will also be undertaken with all schools likely to be affected. For out of hours works, consultation will take place with consideration to Practice note vii of the *Environmental Noise Management Manual* (RTA, 2001) and Strategy 2 of the *Interim Construction Noise Guidelines* (DECC, 2009).		
Construction noise and vibration	NV3	Induction and training will be provided to relevant staff and sub-contractors outlining their responsibilities with regards to noise and vibration.	Construction contractor	Construction
Noisy works, construction hours and scheduling	NV4	Details of all out of hours work required will form part of the CNVMP. Noisy work will be scheduled to be undertaken during the standard hours as far as possible. Noisy activities that cannot be undertaken during standard construction hours are to be scheduled as early as possible during the evening and/or night-time periods. Particularly noisy activities such as the use of impact piling rigs, road and concrete saws, rock hammers, should be scheduled where feasible and reasonable around times of high background noise to provide masking. Deliveries will be carried out during standard construction hours where feasible and reasonable.	Construction contractor	Prior to construction Construction
Construction noise (continuous)	NV5	A protocol, formed as part of the CNVMP, will be developed to identify the need for and provision of respite measures for residential receivers in accordance with the ICNG. Respite measures may include the restriction to the hours of construction activities resulting in impulsive or tonal noise (such as rock hammering, pile driving), or other appropriate measures agreed between the contractor and residential receiver such as alternative accommodation.	~~Transport~~ Construction contractor	Construction
Construction noise	NV6	Where properties have been identified for architectural treatment and these properties will be impacted by noise from construction works, Transport will consult with those property owners on the early installation of treatments to provide noise mitigation during the construction of the proposed modification. This approach will assist in managing noise through all phases of the proposed modification.	Transport <u>Construction contractor</u>	Prior to construction Construction

Impact	ID	Mitigation measure	Responsibility	Timing
Construction traffic	NV7	• Truck drivers will be advised of designated vehicle routes, parking locations, acceptable delivery hours or other relevant practices (i.e. minimising the use of engine brakes, and no extended periods of engine idling). Vehicle routes should be reviewed, and final selections should consider noise impacts on noise sensitive receivers • Site access and egress points will be located away from residences and other sensitive land uses, where feasible and reasonable • Deliveries and spoil removal will be planned to avoid queuing of trucks on or around the construction ancillary facilities • Construction sites will be arranged to limit the need for reversing associated with regular / repeatable movements (e.g. trucks transporting spoil) to minimise the use of reversing alarms • Where feasible and reasonable, non-tonal reversing alarms will be used, taking into account the requirements of the Workplace Health and Safety legislation. • Spoil will be moved during the day where practical, and feasible and reasonable management strategies will be investigated in consultation with the NSW EPA to minimise the volume of heavy vehicle movements at night. Mitigation measures for vehicle movements outside of standard construction hours will be included in the CNVMP.	Construction contractor	Prior to construction Construction
Construction noise at ancillary facilities	NV8	The noise associated with the operation of construction ancillary facilities will primarily result from the operation of fixed and mobile plant and truck movements. Consideration will be given to the layout of the site to maximise distance and shielding to nearby receivers.	Construction contractor	Prior to construction Construction
Noise emissions from construction plant and equipment	NV9	The selection of plant and equipment can have a significant impact on construction noise levels. Appropriate plant will be selected for each task to minimise the noise contributions. Alternative works methods such as use of hydraulic or electric-controlled units in place of diesel units will be considered and implemented where feasible and reasonable. The use of alternative machines that perform the same function (such as rubber wheeled plant) will be considered in place of steel tracked plant. Equipment will be regularly inspected and maintained to ensure it is in good working order. Plant should be located on site with as much distance as possible between the plant and noise sensitive receivers. Noisy equipment will be orientated away from residential receivers where feasible and reasonable.	Construction contractor	Prior to construction Construction
Noise from construction ancillary facilities	NV10	Detailed noise assessments will be carried out for all ancillary facilities required for construction of the proposed modification. The requirement for temporary noise walls within ancillary facilities and adjacent to construction works, and the requirement for other appropriate noise management measures, is to be assessed and implemented prior to the commencement of activities which have the potential to cause noise or vibration impacts.	~~Transport~~ Construction contractor	Prior to construction Construction

Impact	ID	Mitigation measure	Responsibility	Timing
Construction noise – Requirement for additional mitigation measures	NV11	Additional mitigation measures are provided in CNVG. These measures are applied after standard noise mitigation measures have been applied and where the noise levels are still exceeding the noise management levels. Additional mitigation measures include: • Notification (letterbox drop or equivalent) to give advanced warning of works • Specific notifications to identified stakeholders • Phone calls • Individual briefings • Respite offers, to be considered where there are high noise and vibration generating activities near receivers • Respire Period One where there is out of hours construction noise • Respite Period Two where there is nigh time construction noise • Duration respite where long periods of noise and vibration will be generated • Alternative accommodation for residents where there are highly intrusive noise levels • Verification, such as noise monitoring.	Construction contractor	Prior to construction Construction
Construction vibration impacts	NV12	Equipment size will be selected taking into account the minimum working distances and the distance between the area of construction and the most affected sensitive receiver. The use of less vibration intensive methods of construction or equipment will be considered where feasible and reasonable when working in proximity to existing structures. Equipment will be maintained and operated in an efficient manner, in accordance with manufacturer's specifications, to reduce the potential for adverse vibration impacts.	Construction contractor	~~Prior to construction~~ Construction
Construction vibration impacts	NV13	If the use of vibration intensive plant cannot be avoided within the minimum working distance for cosmetic damage the following procedure will occur as a minimum: • Notification of the works to the affected residents and community. • Works will not proceed until attended vibration measurements are undertaken. Vibration monitors are to provide real-time notification of exceedances of levels approaching cosmetic damage criteria. • If ongoing works are required, a temporary relocatable vibration monitoring system will be installed, to warn operators (via flashing light, audible alarm, short message service (SMS) etc) when vibration levels are approaching the cosmetic damage objective.	Construction contractor	~~Prior to construction~~ Construction
Construction vibrational impacts to heritage buildings and other sensitive structures	NV14	A detailed survey will be undertaken prior to vibration intensive construction commencing to identify all nearby vibration sensitive buildings and structures. Applicable vibration criteria and construction strategies will need to be included in the CNVMP for each of the identified locations, ensuring that the works' impacts will be appropriately controlled.	Construction contractor	~~Prior to construction~~ Construction

Impact	ID	Mitigation measure	Responsibility	Timing
Detour road traffic noise	NV15	To minimise the traffic noise impact from the diversions, works requiring diversions will be limited as follows: • No more than two consecutive evenings and/ or nights • No more than three evenings and/ or night per week • No more than 10 evenings and/ or night per month.	Construction contractor	Construction
	NV16	The Contractor must conduct a detailed construction noise and vibration assessment and implement reasonable and feasible mitigation measures in accordance with the Roads and Maritime Services Construction Noise and Vibration Guideline (2016b). Mitigation measure that may be implemented include the following: • Traffic diversions limited in duration as noted above • Notification (letterbox drop or equivalent) • Specific notifications Individual briefings and/or community consultations.	Construction contractor	Prior to construction Construction
Operational noise	NV17	The hierarchy of noise mitigation is firstly to consider at-source noise mitigation measures such as road design and traffic management, then the use of quieter pavements. A quieter pavement, open graded asphalt, will be used in the proposed modification. If these measures cannot be designed to meet the noise criteria the use of 'in corridor' mitigation measures should be considered, which are generally noise barriers and mounds. Finally, if the applicable noise criteria cannot be met by using a combination of all these methods, at-receiver mitigation measures can be considered such as architectural treatments and property boundary walls. Appendix E (Noise and vibration assessment) identified noise barriers required and receivers that should receive at-receiver architectural treatment. During detailed design, the noise barriers and at-receiver architectural treatments required will be confirmed, prior to installing during construction.	~~Transport~~ Construction contractor ~~Westlink M7 Operator~~	Detailed design Construction ~~Operation~~
	NV18	Operational traffic noise will be monitored at sensitive receivers between six months and one year after opening. If the traffic noise levels are above the levels as predicted during detailed design, consideration of additional feasible and reasonable mitigation measures will be undertaken.	Construction contractor ~~Westlink M7 Operator~~	Operation

Impact	ID	Mitigation measure	Responsibility	Timing
Air quality				
Complaints	AQ1	A communications plan will be displayed at each construction zone, including a duty phone number so stakeholders and community members can get in contact regarding the construction activities. All complaints will be recorded and investigated, and measures taken in response.	Construction contractor	Construction
Cumulative impacts with other projects	AQ2	On a regular basis, the stages of other major constructions within 500 metres of the proposed modification will be assessed, to determine any cumulative impacts. The possibility of co-ordinating activities between sites will be assessed to avoid potentially high impact activities occurring at the same time.	Construction contractor	Construction
Combustion emissions	AQ3	Use of diesel- or petrol-powered generators will be avoided where practicable and mains electricity or battery powered equipment will be used where practicable.	Construction contractor	Construction
	AQ4	All vehicles and plant will be switched off engines when stationary and not be allowed to idle.	Construction contractor	Construction
Dust emissions	AQ5	During periods of high potential for increased air quality impacts and/or prolonged dry or windy conditions the frequency of site inspections will be increased by the person accountable for air quality and dust issues.	Construction contractor	Construction
	AQ6	At each construction zone, the site arrangement will be planned so that dust generating activities are undertaken to minimise dust at nearby receptors. Measures may include stockpiles located as far away from receptors as possible; dust barriers being erected around dusty activities/ site boundary, or similar.	Construction contractor	Construction
	AQ7	A maximum speed limit of 15 km/h on unsurfaced roads and construction work areas will be imposed and signposted.	Construction contractor	Construction
	AQ8	Adequate water supply will be provided on the site for effective dust/ particulate matter suppression/ mitigation, using non-potable water where possible and appropriate.	Construction contractor	Construction
	AQ9	Earthworks and exposed areas/ soil stockpiles will be re-vegetated or stabilised as soon as practicable.	Construction contractor	Construction
	AQ10	Water-assisted dust sweeper(s) will be used on access and local roads, to remove, as necessary, any material tracked out of the site.	Construction contractor	Construction
	AQ11	Vehicles entering and leaving sites will be covered to prevent escape of materials during transport.	Construction contractor	Construction
	AQ12	A wheel washing system will be implemented at relevant construction ancillary facilities (with rumble grids to dislodge accumulated dust and mud prior to leaving the site), where reasonably practicable.	Construction contractor	Construction
Odour	AQ13	Any acid sulphate soils encountered during earthworks will be managed in accordance with the with the *Acid Sulfate Soils Manual* (Acid Sulfate Soil Management Advisory Committee, 1998) and *Guidelines for the Management of Acid Sulfate Materials: Acid Sulfate Soils, Acid Sulfate Rock and Monosulfidic Black Ooze* (NSW Roads and Traffic Authority, 2005b).	Construction contractor	Construction

Impact	ID	Mitigation measure	Responsibility	Timing
Hydrology and flooding				
Flood management	FL1	A Flood Management Plan will be prepared as part of the CEMP for the proposed modification and will detail the processes for flood preparedness, materials management, weather monitoring, site management, and flood incident management. The flood management plan will be developed in accordance with relevant guidelines.	Construction contractor ~~Westlink M7 Operator~~	Prior to construction Construction ~~Operation~~
Impacts on existing drainage systems	FL2	Activities that may affect existing drainage systems during construction will be carried out so that existing hydraulic capacity of these systems is maintained where practicable.	Construction contractor	Construction
Detailed construction planning	FL3	Detailed construction planning is required to consider flood risk at construction sites and construction support sites. This will include: • A review of site layout and construction activity staging to avoid or minimise obstruction of overland flow paths and limit the extent of flow diversion required • Identification of measures to not worsen flood impacts on the community and on other property and infrastructure during construction up to and including the 1% AEP flood event, where reasonable and feasible • Measures to mitigate alterations to local runoff conditions due to construction activities.	Construction contractor	Detailed design Prior to construction
Impacts related to siting of spoil stockpiles	FL4	Spoil stockpiles are to be located in areas not subject to frequent inundation by floodwater, and outside the 10% AEP flood extent. The exact level of flood risk accepted at stockpile sites will depend on the duration of stockpiling operations, the type of material stored, the nature of the receiving drainage lines and also the extent to which it would impact flooding conditions in adjacent development.	Construction contractor	Detailed design Construction planning
Impacts related to locations of construction ancillary facilities	FL5	Construction ancillary facilities are to be located outside high flood hazard areas based on a 1% AEP flood.	Construction contractor	Detailed design Construction planning
Flood emergency management	FL6	Flood emergency management measures during construction are to be prepared and incorporated into relevant environmental and/or safety management documentation in consultation with NSW State Emergency Services (SES) and relevant local Councils.	Construction contractor	Detailed design ~~Prior to~~ Construction
Flooding behaviour related impacts	FL7	The operational impact of the proposed modification on flood behaviour is to be confirmed during detailed design and include consideration of future climate change and a partial blockage of the stormwater drainage system.	~~Transport~~ Construction contractor	Detailed design ~~Prior to~~ Construction
Flood hazard impacts to surrounding environment	FL8	The proposed modification is to be designed and further refinements made (as required) to avoid adverse impacts on: • Residential, commercial, and/ or industrial development during a 1% AEP event, or • Critical infrastructure, vulnerable development or increases in risk to life due to a significant increase in flood hazard for floods up to the PMF. Where the above cannot be achieved, alternative flood levels or mitigation measures may be agreed to with the affected landowner.	~~Transport~~ Construction contractor	~~Prior to~~Construction

Impact	ID	Mitigation measure	Responsibility	Timing
Flood velocity leading to scour	FL9	Localised increases in flow velocities at drainage outlets that would control runoff from the proposed modification are to be mitigated through the provision of scour protection and energy dissipation measures.	Construction contractor ~~Westlink M7 Operator~~	Detailed design Construction ~~Operation~~
~~Impacts to flood emergency management~~	~~FL10~~	~~The function of the widened Westlink M7 in flood emergency management measures shall be prepared in consultation with NSW SES and relevant local councils.~~	~~Transport Westlink M7 Operator~~	~~Detailed design Construction Operation~~
Surface and groundwater				
Soil, surface water, and groundwater	SW1	A Soil and Water Management Plan (SWMP) will be prepared as part of the proposed modification. The plan will outline measures to manage soil and water impacts associated with the construction works, including contaminated land. The SWMP will include: • Measures to minimise/manage erosion and sediment transport both within the construction footprint and offsite, including requirements for the preparation of erosion and sediment control plans (ESCP) for all progressive stages of construction • Measures to manage runoff from spoil and waste storage areas • Procedures to manage unexpected or previously unidentified contaminants • Measures to manage stockpiles, including locations, separation of waste types, sediment controls and stabilisation • Groundwater management measures to limit the risk of exposure to contaminated groundwater • Controls to manage the risk posed to workers from exposure to contaminated groundwater (if encountered) • Processes for dewatering of water that has accumulated on site and from sediment basins, including relevant discharge criteria • Measures to manage potential tannin leachate • Measures to manage accidental spills, including the requirement to maintain materials such as spill kits • Measures to manage potential saline soils • Details of surface water and groundwater quality monitoring to be undertaken prior to, throughout, and following construction • Enhanced sediment and erosion controls be implemented in areas where it is identified that contamination poses a risk to surface water quality. Erosion and sediment control measures will be implemented and maintained at all work sites in accordance with the principles and requirements in *Managing Urban Stormwater – Soils and*	Construction contractor	Prior to construction Construction

Impact	ID	Mitigation measure	Responsibility	Timing
		Construction, Volume 1 (DPIE, 2004) and *Volume 2D* (DECC, 2008a), commonly referred to as the 'Blue Book,' as well as relevant Transport Guidelines.		
	SW2	A dewatering management plan will be prepared and included in the SWMP that sets out the procedures for the discharge of surface water runoff that is retained in sediment controls and exposed excavations. The dewatering management plan will be prepared in accordance with the *Technical Guideline – Environmental Management of Construction Site Dewatering* (Transport, 2011) and will include consideration of the following: • Identification of water quality criteria for the discharge of on-site water and the treatment techniques required to meet these criteria • Methods for achieving the WQOs for any site discharge through best practice erosion and sediment control measures and/or treatment of water through flocculation prior to discharge from sediment retention sumps • Reuse of stormwater where feasible within the scope of construction activities • Selection of suitable locations for the discharge of captured runoff utilising existing drainage paths where it cannot be reused on site • Procedures for the rectification of sediment controls or site practices should the water quality parameters experience exceedances.	Construction contractor	Prior to construction Construction
Sediment Control	SW3	A soil conservation specialist will be engaged for the duration of construction of the proposed modification to provide advice on the planning and implementation of erosion and sediment control measures, including review of Erosion and Sediment Control Plans ESCPs.	Construction contractor	Prior to construction Construction
	SW4	Stockpiles will be managed to minimise the potential for mobilisation and transport of dust and sediment in runoff in accordance with *Stockpile Site Management Guideline* (Roads and Maritime Services, 2015d). This will include: • Minimising the number of stockpiles, the area used for stockpiles and the time that they are left exposed • Locating stockpiles away from drainage lines, waterways, and areas where they may be susceptible to wind erosion • Stabilising stockpiles, establishing appropriate sediment controls, and suppressing dust as required.	Construction contractor	Construction

Impact	ID	Mitigation measure	Responsibility	Timing
Water Quality	SW5	Updated water quality assessment will be undertaken during detailed design to inform site specific discharge criteria to meet the objective of maintaining or improving existing water quality in the receiving watercourses during operation.	Construction contractor	Detailed design
	SW6	A water reuse strategy will be developed for the construction of the proposed modification to reduce reliance on potable water. This strategy will be prepared during the detailed design stage and will outline the construction water requirements and potential water sources to supply the water demand in consultation with Sydney Water. Alternative water supply options to potable water will also be investigated, with the aim of reusing water using recycled water where feasible. This includes sourcing non-potable water from construction sediment sumps where it is feasible to reuse.	Construction contractor	Prior to construction Construction
	SW7	The following measures will be undertaken to manage activities within watercourses, especially works to widen of bridges: • Disturbance of banks and extent of vegetation removal will be minimised • Implementing bank stabilisation, channel reshaping and scour protection where required to mitigate the impact of additional bridge piers on scour and stability of the bed and banks of watercourses • Maintenance of minimum surface water flows to assist in maintaining the viability of aquatic communities and preventing barriers to fish passage • Construction of temporary creek crossings during low flows and design so that drainage of these crossings does not contribute sediment load to the stream • Taking into consideration the former NSW Department of Industry's *Guidelines for controlled activities on waterfront land* (2018) in the design and construction of works within watercourses	Construction contractor	Prior to construction Construction
	SW8	The performance of the stormwater quality controls that are set out in the Modification Report (comprising the existing stormwater quality control basins and gross pollutant traps along the Westlink M7 corridor) will be verified at detailed design stage to ensure that for waterways that receive runoff from the proposed modification, and to the extent that the proposed modification can influence: • The WQOs continue to be met at waterways where they are currently being achieved, or • Existing water quality is improved at waterways where the WQOs are not being met. In the instance during detailed design that it cannot be demonstrated that the water quality controls are effective in mitigating potential impacts in accordance with the above requirements, a review of measures will be undertaken to improve water quality outputs from the Westlink M7 over time, including an assessment of the potential benefits and feasibility or reasonableness of converting a select number of existing water quality control ponds to bioretention basins, in consultation with NSW EPA.	Construction contractor ~~Westlink M7 Operator~~	~~Prior to construction~~ Construction Operation

Impact	ID	Mitigation measure	Responsibility	Timing
	SW9	A construction water quality monitoring program will be developed and included in the SWMP for the proposed modification to establish baseline conditions, observe any changes in surface water and groundwater during construction, and inform appropriate management responses. Baseline monitoring will be undertaken monthly for a minimum of 12 months prior to the commencement of construction, inclusive of the monitoring that is presented in Section 5.6 of **Appendix G** (Surface water and flooding assessment). As a minimum, this will include three wet weather sampling events over six months where feasible. Sampling locations and monitoring methodology to be undertaken during construction will be further developed in detailed design in accordance with the *Guidelines for Construction Water Quality Monitoring* (RTA, 2003) and the *ANZECC Water Quality Guidelines* (ANZECC/ ARMCANZ, 2000). This will include the monitoring of surface water quality at or near moderate to high contamination risk areas for relevant contaminants during work in those locations (when/if these areas are confirmed during detailed design). The monitoring will include collection of samples for analysis from sedimentation control discharge points, visual monitoring of other points of release of construction waters and monitoring of downstream waterways. The frequency of monitoring will be confirmed during detailed design and will be a minimum of once every month at all sites, as well as additional monitoring following wet weather events. Should the results of monitoring identify that the water quality management measures are not effective in adequately mitigating water quality impacts, additional mitigation measures will be identified and implemented as required.	Construction Contractor	Prior to construction Construction
	SW10	Further water quality assessment will be undertaken during detailed design to determine whether additional site-specific discharge criteria are required to meet the objective of maintaining existing water quality in the receiving watercourses.	Construction Contractor	~~Prior to construction~~ Detailed design
Spills	SW11	The adequacy of the existing spill containment measures along the Westlink M7 corridor, will be verified during the detailed design of the proposed modification to ensure that they are suitable for the capture of spills from the widened road pavement. In the instance during detailed design that it cannot be demonstrated that spill control from the widened road pavement cannot be achieved with existing spill containment measures, then additional spill containment mitigation measures will be identified, implemented, and incorporated into existing maintenance procedures.	Construction Contractor Westlink M7 Operator	Detailed design Operation
Flooding on shared use paths	SW12	Investigate ways to improve the flood immunity of the shared path near Ash Road, Prestons.	Construction contractor	Detailed design
Water quality	SW13	During the development of the detailed design, the water quality objectives that are set out in the Modification Report are to be reviewed and updated where required to include consideration of the *Performance Criteria for Protecting and Improving the Blue Grid in the Wianamatta – South Creek Catchment* (DPIE, 2022).	Construction contractor	Detailed design

Impact	ID	Mitigation measure	Responsibility	Timing
Biodiversity				
Identified biodiversity values	B1	A Biodiversity Management Plan will be developed to include, but not be limited to, the following: • A Microbat Management Plan by a microbat specialist to be created (prior to construction) • Environmental site inductions • Demarcation of clearing areas and 'No Go' zones through fencing and inclusion in the Construction Environmental Management Plan (CEMP), in accordance with *Guide 2: Exclusion zones* of the *Biodiversity Guidelines: Protecting and managing biodiversity on RTA projects* (RTA, 2011) • Methods of vegetation removal • Protocols for tree clearing including pre-clearing surveys and mitigation measures for any fauna encountered • Erosion and sediment controls including dust suppression and minimisation of dust generation • Rehabilitation methods including management of native and riparian vegetation, weeds, fauna habitat • Weed prevention measures and management of priority weeds within the study area in accordance with *Guide 6: Weed management* of the *Biodiversity Guidelines: Protecting and managing biodiversity on RTA projects* (RTA, 2011) • Regular scheduled litter and waste removal from the study area • Implementation of an unexpected species find procedure, particularly in regard to bridge widenings and microbats • Habitat will be replaced or re-instated in accordance with *Guide 5: Re-use of woody debris and bushrock* and *Guide 8: Nest boxes* of the *Biodiversity Guidelines: Protecting and managing biodiversity on RTA projects* (RTA, 2011) • Rehabilitation strategy for waterways after the removal of temporary waterway crossing and diversions, including erosion and sediment control, management of flow, stockpile management, stabilisation of bed and banks and revegetation • Any large woody debris to be retained within the retained portions of the study area to provide refuge habitat for invertebrates and reptiles (*Guide 5: Re-use of woody debris and bushrock*)	Construction contractor ~~Westlink M7 operator~~	Prior to construction Construction ~~Operation~~
	B2	An ecologist to inspect the study area, including drainage and creek lines and relocate any amphibians prior to and during vegetation clearing	Construction contractor	~~Prior to construction~~ Construction
	B3	Undertake field survey in accordance with the bat survey guidelines (OEH 2018), Appendix F of the *Microbat Management Guidelines* (Transport for NSW, 2021a) and the Threatened Biodiversity Data Collection to confirm whether Southern Myotis is using the Subject Land for its foraging ~~purposes~~ or breeding/roosting, to both inform the Microbat Management Plan and to refine the offset	Westlink M7 operator	Prior to construction

Impact	ID	Mitigation measure	Responsibility	Timing
		obligation. ~~and refine the offset obligation for this species, as required.~~		
	B4	Bridge works, as a potential habitat for microbat species, are to be undertaken in accordance with Appendix F of *Microbat Management Guidelines* (Transport for NSW, 2021a)	Construction contractor	Construction
	B5	If sediment/ erosion booms are used, they are placed so they do not obstruct fish passage, where possible	Construction contractor	Construction
	B6	Design of temporary waterway crossings and diversions are consistent with Managing *Urban Stormwater: Soils and construction – Volume 1 and 2D* (DPIE, 2004) and *Policy and Guidelines for Fish Habitat Conservation and Management* (DPI, 2013) and *Why do Fish Need to Cross the Road? Fish Passage Requirements for Waterway Crossings* (Fairfull, 2003)	Construction contractor	Construction
	B7	Relocation of native fish by a trained aquatic ecologist if they become stranded as a result of waterway diversions, temporary crossings, or dewatering activities.	Construction contractor	Construction
	B8	A detailed water monitoring program will be implemented during construction, where site observations are recorded by a suitably qualified person, and will include: • Routine inspections of temporary waterway crossings, waterway diversions and dewatering activities • Rapid geomorphic survey, including aquatic macrophyte mapping, bank erosion, channel stability and sediment deposition • Stormwater discharges into the receiving watercourses, including an estimate of flows, visual appearance, and water quality (handheld meter) testing on an opportunistic basis • Visual and olfactory observation of pollution (e.g., oil sheens, coarse debris, odours) • Opportunistic observations of aquatic fauna (e.g. stranded fish).	Construction contractor	Construction
	B9	Landscaping to focus on utilising naturally occurring endemic tree and shrub species, in accordance with the updated Landscape Plan for the Westlink M7	Construction contractor	Construction
	B10	Monitoring and maintenance of all established erosion and sedimentation controls	Construction contractor	Construction Operation
	B11	Existing Westlink M7 Operational Environmental Management Plan to be ~~consulted,~~ updated, and utilised.	Westlink M7 Operator	Prior to operation

Impact	ID	Mitigation measure	Responsibility	Timing
Aboriginal heritage				
N/A – AHIMS database currency	AH1	Aboriginal Site Impact Recording (ASIR) forms will be submitted to the AHIMS Registrar for all Aboriginal sites known to have been destroyed or partially destroyed as a result of the approved project (as indicated in the final approved Indigenous Heritage Archaeology Management Sub Plan (IHMSP)).	Construction contractor~~'s Aboriginal Cultural Heritage Advisor~~	Prior to construction
N/A – AHIMS database currency	AH2	An Aboriginal Site Impact Recording (ASIR) form will be submitted to the AHIMS Registrar for Aboriginal site 'MC-2' (45-5-0779), indicating that the site has been destroyed.	Construction contractor~~'s Aboriginal Cultural Heritage Advisor~~	Prior to construction
Accidental construction-related impacts to known Aboriginal sites as well as unexpected finds	AH3	An Aboriginal Cultural Heritage Management Plan (ACHMP) shall be prepared prior to construction of the proposed modification and included in the Construction Environmental Management Plan (CEMP). An Unexpected Aboriginal Heritage Finds Procedure (UAHFP) will be included in the ACHMP to cover the unanticipated discovery of any actual or potential Aboriginal heritage items. The procedure will cover all Aboriginal objects (as defined by the *National Parks and Wildlife Act 1974*), including human skeletal remains.	Construction contractor	Prior to construction Construction
Accidental construction-related impacts to known Aboriginal sites as well as unexpected finds	AH4	All standard environment site inductions prepared for the proposed modification will include an Aboriginal heritage component. At a minimum, this will outline current protocols and responsibilities with respect to the management of Aboriginal heritage within the construction footprint (including unexpected finds) and provide an overview of the diagnostic features of potential Aboriginal site types/ objects.	Construction contractor	~~Prior to construction~~ Construction
Avoidance of impacts to nearby Aboriginal sites during construction	AH5	Aboriginal sites located outside of the construction footprint, but directly adjacent to it, will be actively protected during construction via temporary fencing. Fencing is to be installed along relevant sections of the construction footprint and remain in place for the duration of construction works in the vicinity. Where fencing is to be installed along the construction footprint, individual fencing lengths will be determined by a qualified archaeologist on the basis of both a visual inspection of the registered AHIMS site location and critical review of relevant existing data sources (e.g. associated site cards and assessment reports). All relevant staff and contractors are to be made aware of the nature and locations of these sites as part of standard site inductions. All sites will be identified on relevant site plans.	Construction contractor	Construction
Avoidance of impacts to community, the environment, and Aboriginal sites	AH6	Stakeholder consultation will occur prior to construction in order to: • Identify key cultural values or features within the study area • Document stories that belong to the Deerubbin and Gandangara community and with permission, may be used educate Transport's personnel and contractors. • ~~Inform an environmental impact assessment under the *Environmental Planning & Assessment Act 1979.*~~	Transport	Prior to construction

Impact	ID	Mitigation measure	Responsibility	Timing
Aboriginal heritage values	AH7	The following recommendations are to be considered during detailed design and construction: • Opportunities to incorporate indigenous plantings into the design • Design will consider and identify key cultural values or features through signage or artwork along the Westlink M7 corridor • Recognition of Aboriginal servicemen through a new memorial (either at the M12 interchange, similar to the Light Horse Interchange, as part of the M12 Motorway project), or otherwise as part of the existing Light Horse Interchange.	Construction Contractor	Detailed design and construction planning
Non-Aboriginal heritage				
Construction Heritage Management Plan	H1	A Construction Heritage Management Plan, to be included in the CEMP, shall be prepared prior to construction of the proposed modification. The CEMP should include the location of the known heritage items that are within the study area, including the Upper Canal System, details relating to vibration management measures for works in the vicinity of the Upper Canal, and a stop works procedure for unexpected finds.	Construction contractor	Construction
Upper Canal System	H2	Vibration recommendations contained in Appendix E (Noise and vibration assessment) will be adhered to during construction for minimising potential ground vibration impacts to the Upper Canal System tunnel.	Construction contractor	Construction
	H3	Consultation with WaterNSW and their heritage specialist, detailing the proposed works in the vicinity of the Upper Canal System, shall be undertaken prior to construction near this item. A copy of this assessment shall be made available to WaterNSW and their heritage specialist prior to any consultation.	~~Transport~~ Construction contractor	Construction
	H4	The Upper Canal System is subject to a Conservation Management Plan (CMP) (Government Architects Office, 2016). All work in the vicinity of this heritage item should have regard to the relevant policies included in this CMP, which are provided in Section 8.2 of Appendix J (Non-Aboriginal heritage assessment) of the Modification Report. All work in the vicinity of this item will also have regard to the *Guideline for Development Adjacent to the Upper Canal and Warragamba Pipelines* (WaterNSW, 2021).	Construction contractor ~~Transport~~	~~Prior to construction~~ Construction
Potential indirect impacts to Shaft No. 4	H5	Any proposed changes to the design or construction methodology in the vicinity of Shaft No.4 are to be reviewed by a suitably qualified heritage specialist to assess any changes to potential indirect vibration impacts.	Construction contractor	Construction

Impact	ID	Mitigation measure	Responsibility	Timing
Land use and property				
Temporary acquisition of properties (leases)	LUP1	A survey of all ~~leased~~ areas to be leased during construction will be completed to document the pre-leased condition.	Construction contractor	Prior to use of each area
	LUP2	All areas leased for the modification will be rehabilitated upon completion of construction and restored to their existing condition, or as otherwise agreed with the landowner. This will occur within six months of completion of the construction phase.	Construction contractor	Construction Post-construction
	LUP3	Terms and conditions of private land use for construction access will be determined in consultation and agreement with relevant landowners.	Construction contractor	Prior to construction
Utility impacts	LUP4	Consultation with the relevant utility providers will be undertaken prior to construction to confirm the presence of utilities and refine potential utility adjustments and utility protection measures during detailed design.	Construction contractor	Prior to construction
	LUP5	The final construction methodology will consider measures required to protect utilities or avoid impacts on these services during construction.	Construction contractor	Construction
Land acquisition	LUP6	Transport to refine design of the proposed modification to confirm acquisition requirements and consult with relevant stakeholders and land owners where required.	Transport	Detailed design
Landscape character, visual amenity, and urban design				
Unintentional impacts to trees to be retained	LV1	Establish tree protection zones (TPZs) around trees to be retained. Tree protection will be undertaken in accordance with *AS 4970-2009 Protection of Trees on Development Sites* and will include exclusion fencing of TPZs	Construction contractor	Construction
Visual impact from presence of construction	LV2	Provide well-presented and maintained construction hoarding and site fencing with shade cloth (or similar material) (where necessary) to minimise visual impacts during construction. Hoardings and site fencing will be removed following construction completion.	Construction contractor	Construction
	LV3	Provide cut-off or directed lighting within and outside of the construction site, with lighting location and direction considered to ensure glare and light spill is minimised.	Construction contractor	Construction
	LV4	Keep construction areas clean and tidy and place refuse in appropriate receptacles.	Construction contractor	Construction
Visual impact from removal of trees	LV5	The original intent surrounding the Light Horse Sculpture Parade will be safeguarded, with the design development process for the reinstatement of the artwork to be carried out in consultation with stakeholders including the Office of Veterans Affairs, the Returned & Services League (RSL) and the original artists (where appropriate). Potential hardening of the landscape and the memorial character of the fig planting should be mitigated by replacing trees to be removed, for example, in consultation with stakeholders, as above.	~~Transport~~ Construction contractor	Detailed design ~~Prior to construction~~ Construction
	LV6	While the replacement of trees within the Westlink M7 operational footprint may not be possible due to maintenance requirements, it is recommended to reinstate the visual markers of the creek corridors within the Westlink M7, by:	~~Transport~~ Construction contractor	Prior to operation

Impact	ID	Mitigation measure	Responsibility	Timing
		• Planting of riparian tree species (such as Melaleuca and Casuarina) on the batters within the central median as they fall towards the lower area at either end of bridges • Planting of areas under bridges within riparian corridors with indigenous species within the Cumberland Plain Riverflat Forest community, including tall shrubs, grasses and groundcovers. Investigate opportunities for additional tree plantings.		
Visual impacts	LV7	Undertake seed collection prior to construction (e.g. within three months of construction contract award, where possible), to source seeds to be used in post-construction rehabilitation. Use native and endemic plant species in post-construction rehabilitation otherwise.	Construction contractor	Prior to construction
	LV8	Opportunity to enhance green infrastructure and tree planting through the areas adjacent to noise walls and other areas along the edges of the corridor to mitigate impacts from tree removal along the Westlink M7 median. This will be subject to detailed design and also the identification of existing verges/ batters within the Westlink M7 corridor that would be appropriate for tree planting completed as part of the works.	~~Transport~~ Construction contractor	Detailed design
	LV9	Opportunity for Water Sensitive Urban Design to be considered when local drainage conditions are altered throughout the corridor where the gradient and widening conditions require further detail.	~~Transport~~ Construction contractor	Detailed design
Soils and contamination				
Soil and water	C1	A Soil and Water Management Plan (SWMP) will be implemented during construction and incorporate the following measures: • Worker health and safety measures, waste management (including stockpiling) and tracking for contamination • Register of known or suspected areas of contamination (from site investigations) and areas requiring remediation • An unexpected finds procedure to manage previously unidentified chemical or asbestos contamination • Asbestos Management Plan for areas where ACM and/or friable asbestos is likely to be encountered, with the plan including worker health and safety measures • Testing procedures to determine the actual presence of acid sulfate soils prior to ground disturbance activities • Testing procedures to determine the presence of saline soils prior to ground disturbance activities. • Process for testing, treating and discharging water from site to meet applicable water quality limits. • Site-specific Erosion and Sediment Control Plan which will identify detailed measures and controls, that are consistent with the practices and principles in the current guidelines, to be	Construction contractor	Prior to construction

Impact	ID	Mitigation measure	Responsibility	Timing
		applied to minimise erosion and sediment control risks. These include, but not necessarily limited to: runoff, diversion and drainage points; use of sediment basins and sumps; scour protection; stabilising disturbed areas as soon as possible, check dams, fencing and swales; and staged implementation arrangements • Appropriate management criteria and responses to identify and manage water pollution risks associated with potentially contaminated stormwater • Measures to avoid the discharge of contaminated runoff. The assessment criteria for discharges from contaminated areas would be based on applicable WQOs (refer Table 7.4 of the SWFIA in Appendix G).		
Contamination	C2	A Sampling, Analysis and Quality Plan will be prepared ahead of detailed site investigations, focusing on potential source areas of potential contamination where the likelihood risk of contamination is moderate to high, and additional areas to give further understanding of potential contamination impacts. The results from the site investigations will be assessed against criteria contained within the *National Environment Protection (Assessment of Site Contamination) Measure* (2013) and other applicable NSW statutory guidelines to assess whether remediation is required or other management measures during construction.	Construction contractor	Prior to construction
	C3	Remediation will be undertaken where assessed as required based on the outcome of DSIs. Works will be performed in accordance with the hierarchy of preferred strategies in the *Guidelines for the NSW Site Auditor Scheme* (NSW EPA, 2017c) and CRC CARE Pty Ltd (CRC, CARE, 2020) National Remediation Framework. Where practical, remediation works will be integrated with excavation and development works performed during construction and address requirements of SEPP 55.	Construction contractor	Prior to construction
	C4	Contamination within the Westlink M7 lease area will be managed in accordance with the existing or updated Operational Environmental Management Plan (OEMP). Pre-construction contamination condition surveys will be undertaken on all sites intended to be used as construction ancillary facilities. Post-construction contamination condition surveys will be undertaken on all ancillary facilities and any contamination caused by the use of the site as a construction ancillary facility remediated to a standard suitable for the identified land use. Remediation will be undertaken by the construction contractor prior to operation of the modification.	Construction contractor Westlink M7 Operator	Construction Prior to operation Operation

Impact	ID	Mitigation measure	Responsibility	Timing
Acid sulfate soils	C5	Prior to ground disturbance in areas of potential inland acid sulfate soil occurrence, testing will be carried out to determine the actual presence of acid sulfate soils. This measure is especially appliable to areas on waterbodies where disturbance of sediments and surrounding soil is to occur. If acid sulfate soils are encountered, they will be managed in accordance with the *Acid Sulfate Soil Manual* (Acid Sulfate Soil Management Advisory Committee, 1998) and *Guidelines for the Management of Acid Sulfate Materials: Acid Sulfate Soils, Acid Sulfate Rock and Monosulfidic Black Ooze* (NSW Roads and Traffic Authority 2005b).	Construction contractor	~~Prior to~~ Construction
Salinity	C6	Prior to ground disturbance in high probability salinity areas, testing will be carried out to determine the presence of saline soils. If salinity is encountered, excavated soils will not be reused, and will be managed in accordance with *Book 4 Dryland Salinity: Productive Use of Saline Land and Water* (NSW DECC, 2008c). Erosion controls will be implemented in accordance with the *Managing Urban Stormwater: Soils and Construction Volume 1* (DPIE, 2004).	Construction contractor	~~Prior to~~ Construction
Ancillary facilities	C7	Post-construction contamination condition surveys will be undertaken on all ancillary facilities and may be required by lease agreements. Any contamination caused by the use of the site as a construction ancillary facility for the widening works will be remediated to a standard suitable for the identified land use. Remediation will be undertaken by the construction contractor prior to operation of the modification.	Construction contractor	Prior to operation
Social				
Community and Stakeholder Engagement Plan	SE1	A Community and Stakeholder Engagement Plan will be implemented for the proposed modification. The plan will describe where information of the proposed modification is available, and contain a complaints management procedure, contact details for the person responsible for managing and resolving complaints, and non-English options.	~~Transport~~ Construction contractor	Prior to construction Construction
Construction workers	SE2	Opportunities to source construction workers from the local community will be investigated.	~~Transport~~ Construction contractor	Prior to construction
Sustainability				
Desired sustainability outcomes not met	SU1	A Sustainability Management Plan will be developed and implemented during detailed design, to give effect to the sustainability strategy for the proposed modification. The management plan will detail measures to meet the sustainability objectives and targets and IS rating tool credit requirements.	Construction contractor	Detailed design Construction Operation
	SU2	A ~~Design~~ rating level of 'Excellent' will be targeted for Design and As-Built under Version 1.2 of the *IS Rating Tool*.	Construction contractor	Detailed design Construction

Impact	ID	Mitigation measure	Responsibility	Timing
Climate change				
Impacts related to increased rainfall and weather event intensities	CC1	Transport will clearly communicate to construction contractor/s that there is expected to be an increased likelihood of extreme rainfall and wind events occurring during construction. The ordering of materials for, and breadth and scope of implementation of mitigation measures proposed as part of this Modification Report will take this into account. The delivery schedule will allow contingency for potential delays associated with extreme rainfall.	~~Transport~~ Construction contractor	Construction
Increasing temperatures and number of hot days	CC2	During detailed design, opportunities will be considered to provide additional shading for road users who may be exposed to high temperatures for prolonged periods (e.g. breakdown bays).	~~Transport~~ Construction contractor	Detailed design
	CC3	Routine maintenance and inspections will be undertaken of key structural components. Maintenance programs will be augmented to account for extreme weather events. Construction planning will include consideration of extreme heat impacts and additional measures to implement.	Transport Construction contractor Westlink M7 Operator	Construction Operation
	CC4	Resourcing and capacity of response crews will be reviewed ahead of expected extreme heat events.	Transport Westlink M7 Operator	Operation
	CC5	Appropriate landscape design will consider future climate impacts relating to drought (i.e. tolerant species) to provide ongoing shading along the operational footprint of the proposed modification.	~~Transport~~ Construction contractor	Detailed design Construction
	CC6	During detailed design, options for implementing redundancy (e.g. batteries) into the Intelligent Transport Systems (ITS) will be considered.	~~Transport~~ Construction contractor	Detailed design
	CC7	Implement use of energy efficient LED lighting and low power mode options for other electrical equipment to reduce to reduce energy demand.	~~Transport~~ Construction contractor	Detailed design
Extreme rainfall and flooding	CC8	Drainage design should consider the projected flooding impacts from the climate change projections.	~~Transport~~ Construction contractor	Detailed design
	CC9	To address erosion/ scour potential from increased rainfall intensity due to climate change, options for stabilising and/ or reducing the slope of embankments will be considered during detailed design.	~~Transport~~ Construction contractor ~~Westlink M7 Operator~~	Detailed design ~~Operation~~
Storms	CC10	Ensure electrical equipment will be able to connect generators to roadside cabinets in the event of wider power outages. Lightning protection systems/ earth proofing to be installed on major electrical equipment.	~~Transport~~ Construction contractor	Detailed design

Impact	ID	Mitigation measure	Responsibility	Timing
Urban heat island	CC11	Options to minimise the urban heat island effect will be explored during detailed design (e.g. through vegetation, consideration of materials, surfaces and finishes)	Construction contractor	Detailed design Construction planning
Greenhouse gases				
Emissions from electricity consumption	GG1	GHG emissions will be reduced through the use of GreenPower and/or other renewable energy sources as part of the proposed modification electricity procurement. The proposed modification is targeting 100% renewable energy-sourced electricity for operations, and minimum 20% for construction	Construction contractor Westlink M7 Operator	Construction Operation
	GG2	Solar construction lighting and variable message signs will be utilised during construction	Construction contractor	Construction
Emissions from construction plant and materials	GG3	Opportunities to use low emission construction materials, such as recycled aggregates in road pavement and surfacing, and cement replacement materials will be investigated and incorporated where feasible and cost-effective	Construction contractor	Detailed design Construction
	GG4	Construction plant and equipment will be well maintained to allow for optimal fuel efficiency	Construction contractor	Construction
	GG5	Raw materials will be managed to reduce energy requirements for their processing. For example, stockpiled materials will be covered or provided undercover storage where possible to reduce moisture content of materials, and therefore the process and handling requirements	Construction contractor	Construction
	GG6	Locally produced goods and services will be procured where feasible and cost effective, to reduce transport fuel emissions	Construction contractor	Construction
Emissions from fuel use	GG7	E10 bioethanol and B5 biodiesel will be utilised where feasible	Construction contractor	Construction
Emissions from maintenance (and construction) activities	GG8	Purchasing certificates to offset Scope 1 and 2 emissions for construction and maintenance activities will be considered	~~Transport Westlink M7 Operator~~ Construction contractor	Construction Operation
Waste				
Waste and resources	W1	A construction waste and resource management plan (CWRMP) will be prepared prior to construction and outline appropriate management procedures to be implemented during construction. It shall include, but not be limited to: • A procurement strategy to minimise unnecessary consumption of materials and waste generation • Identification of the waste types and volumes that are likely to be generated • Adherence to the waste management hierarchy principles of avoid/ reduce/ re-use/ recycle/ dispose • Classification of waste in accordance with the *Waste Classification Guidelines* (NSW EPA, 2014)	Construction contractor	Prior to construction

Impact	ID	Mitigation measure	Responsibility	Timing
		• Waste management procedures to manage the segregation, handling, storage and disposal of waste, including unsuitable material or unexpected waste volumes, identification of re-use options for surplus materials, and identification of licensed waste disposal facilities to be used • Identification of reporting requirements and procedures for waste tracking required		
	W2	Wherever feasible and reasonable, construction materials will be sourced locally from within the Sydney region.	Construction contractor	Prior to construction Construction
Spoil	W3	A spoil management plan shall be prepared as part of, and in line with the CWRMP. The spoil management plan shall outline appropriate management procedures for the generation, management and importation of spoil. It shall include, but not be limited to: • Procedures for testing and classification of spoil • Identification of spoil re-use options • Spoil stockpile management procedures • Licensed spoil disposal and re-use locations • Imported spoil sources and estimated volumes.	Construction contractor	Prior to construction
Cumulative waste	W4	Where the construction of the M12 Motorway interchange coincides with the proposed modification, consultation will occur with the relevant M12 project team during detailed design, construction planning and during construction, to identify opportunities for waste avoidance and re-use, and other efficiencies. This may include for example coordinated construction planning, co-management of relevant construction areas, sharing of resources, and spoil management/re-using spoil from excavations as fill material.	Construction contractor	Prior to construction Construction
Vegetation waste	W5	Remaining vegetation that is not re-used onsite will be discussed with relevant council(s), Western Sydney Parklands Trust and Landcare groups and other relevant government agencies to determine if hollows, tree trunks, mulch, bush rock and root balls salvaged from native vegetation could be used by others in habitat enhancement, beneficial re-use and rehabilitation work, before pursuing other disposal options.	Construction contractor	Construction

Impact	ID	Mitigation measure	Responsibility	Timing
Hazard and risk				
Hazards and risks during construction	HR1	A Work Health Safety Management Plan (WHSMP) will be prepared for the proposed modification. The WHSMP will include: • Details of the hazards and risks associated with construction activities • Risk management measures • Procedures to comply with legislative and industry standard requirements • Use of appropriate personal protective equipment • Contingency plans, as required • An incident response management plan • Training for all personnel (including subcontractors) including site inductions, the recognition and awareness of site hazards and the locations of relevant equipment to protect themselves and manage any spills. All staff will have the relevant training and certificates.	Construction contractor	Prior to construction Construction
Bushfire risk	HR2	Measures to mitigate and manage bushfire risk will be developed and included as part of site-specific hazard and risk management measures within the WHSMP. Measures will include the maintenance of ancillary facilities in a tidy and orderly manner and the storage and management of dangerous goods and hazardous materials in accordance with applicable legislation, policy, and Australian Standards.	Construction contractor	Prior to construction Construction
	HR3	A Bushfire Emergency Management and Evacuation Plan will be developed for the construction phase. The plan will outline stop work procedures and evacuation routes. The bushfire evacuation procedure within each plan will be completed in accordance with NSW RFS *Guide to Developing a Bushfire Emergency Management and Evacuation Plan* (2014).	Construction contractor	Prior to construction Construction
	HR4	Relevant works will be managed under a Hot Work and Fire Risk Work procedure. Where necessary essential hot works may be completed on a day declared to be a Total Fire Ban (TOBAN) providing it complies with the Hot Work and Fire Risk Work procedure exemption from the NSW RFS.	Construction contractor	Prior to construction Construction
Wildlife hazard	HR5	Design of water treatment basin upgrades (if required) and species selection for landscaping plants/trees will consider wildlife hazard (e.g. attracting birds), in relation to motorway use and the Western Sydney Airport. This includes the requirements of the *National Airports Safeguarding Framework* (National Airports Safeguarding Advisory Group, n.d.), and ~~specific~~ relevant requirements of the ~~Western Sydney Airport (e.g. preferred landscaping species)~~ Aerotropolis SEPP (Western Sydney Aerotropolis) 2020 and Aerotropolis Development Control Plan.	Construction contractor	Detailed design Construction
Incident response	HR6	An Incident Response Management Plan will be developed and implemented during construction. The response to incidents within the road will be managed in accordance with the memorandum of understanding between Roads and Maritime and the NSW Police Service, NSW Rural Fire Service, NSW Fire Brigade and other emergency services.	Construction contractor	Prior to construction Construction

Impact	ID	Mitigation measure	Responsibility	Timing
Utilities	HR7	Consultation with relevant utility providers will be undertaken to confirm the presence of utilities and refine potential utility adjustments and utility protection measures (with a view to avoiding impacts if possible and protecting or adjusting if required) during detailed design. The final construction methodology will consider any special measures required to avoid impacts on these services during construction, where possible.	Transport Construction contractor	Detailed design ~~Prior to construction~~ ~~Construction~~
Storage of dangerous goods and hazardous substances	HR8	Storage, handling and use of dangerous goods and hazardous substances will be in accordance with the *Work Health and Safety Act 2011* and the *Storage and Handling of Dangerous Goods Code of Practice* (WorkCover NSW, 2005).	Construction contractor	Construction
	HR9	Storage areas for oils, fuels and other hazardous liquids will be located outside of identified flood-prone areas identified in Section 6.2.1 of Appendix G (Surface water and flooding assessment). Secure, bunded areas will be provided around storage areas.	Construction contractor	Construction
	HR10	A register and inventory of dangerous goods and hazardous substances will be kept at each storage location. This register will be maintained as part of an incident response management plan developed for the proposed modification. The register will include Safety Data Sheets which will be obtained for dangerous goods and hazardous substances prior to their delivery onsite and stored in an accessible place.	Construction contractor	Construction
Contamination from transportation of hazardous goods	HR11	All hazardous substances will be transported in accordance with relevant legislation and codes, including the *Dangerous Goods (Road and Rail Transport) Regulation 2014* and the *'Australian Code for the Transport of Dangerous Goods by Road and Rail'* (National Transport Commission, 2020).	Construction contractor	Construction
Emergency vehicles	HR12	Suitable turning lanes for emergency vehicles will be provided across the median strip between access ramps enabling emergency vehicles to change direction without the need for travelling to the nearest access ramp.	~~Westlink M7 Operator~~ Construction contractor	~~Operation~~ Construction

Impact	ID	Mitigation measure	Responsibility	Timing
Cumulative				
Cumulative impacts	Cu1	Consultation with other project owners, operators, and/ or contractors to understand construction programmes and ensure that conflicting requirements for access, traffic lane closures, high noise and vibration generating activities, and nightworks are avoided or minimised as much as reasonably practical, in order to prevent construction fatigue for local sensitive receptors. Communication with other project owners, operators, and/ or contractors should be an iterative process and continue throughout the construction phase. These management measures to prevent construction fatigue should be captured in the Construction Environment Management Plan (CEMP). They should also be presented in the topic-specific environmental management plans, such as Construction Traffic and Access Management Plan (see Mitigation Measure T1) and Construction Noise and Vibration Management Plan (CNVMP) (see Mitigation Measure NV1).	~~Transport~~ Construction Contractor	Prior to construction Construction
	Cu2	Clear communication will be undertaken with the community when required, which is coordinated with other projects so that similar projects retain consistent messaging and complaint mechanisms.	~~Transport~~ Construction Contractor	Prior to construction Construction

Appendix C – Government agency advice

Appendix C-1 – Department of Planning and Environment – Water

Department of Planning and Environment

Our ref: OUT22/11265

Jonathan Kerr
Planning and Assessment Group
NSW Department of Planning and Environment

Email: jonathan.kerr@planning.nsw.gov.au

23 August 2022

Subject: **M7 Motorway (Mod 6 Widening) (SSI-663-Mod-7) - Modification Report**

Dear Mr Kerr

I refer to your request for advice sent on 26 July 2022 to the Department of Planning and Environment (DPE) Water about the above matter.

This modification would enable widening of part of the M7 motorway in response to current and projected future traffic growth, and to address reduced motorway efficiency and enhance safety.

DPE Water has reviewed the Modification Report, with the following recommendation provided:

- Post Approval Recommendation - Works within waterfront land must be in accordance with the Guidelines for Controlled Activities on Waterfront Land.

  Explanation

  The modification notes there will be increased flow velocities from outlets, therefore appropriate scour protection should be implemented.

  The guidelines are available at:

  https://water.dpie.nsw.gov.au/licensing-and-trade/approvals/controlled-activity-approvals/what/guidelines

Please note that the licensing and approval function has now moved from NRAR to DPE Water. Should you have any further queries in relation to this submission please do not hesitate to contact DPE Water Assessments water.assessments@dpie.nsw.gov.au. or to the following coordinating officer within DPE Water:

Simon Francis – Senior Project Officer
E: simon.francis@dpie.nsw.gov.au
M: 0428 926 117

Yours sincerely

E Rogers

Liz Rogers
Manager, Assessments, Knowledge Division
Department of Planning and Environment: Water

Appendix C-2 – Department of Planning and Environment – Environment and Heritage Group

Department of Planning and Environment

Our ref: DOC22/667496
Your ref: SSI-663-Mod-6

Jonathan Kerr
Planning Group
Department of Planning and Environment
4 Parramatta Square,
Parramatta NSW 2150

Subject: Advice on EIS - M7 Motorway (Mod 6 Widening) (SSI-663-Mod-6)

Dear Mr Kerr

I refer to your email dated 26 July 2022 requesting comment from the Environment and Heritage Group (EHG) on the Environmental Impact Statement for the proposed M7 Motorway (Modification 6 - Widening).

Biodiversity
The biodiversity development assessment report (BDAR) prepared by Niche Environmental dated 31 July 2022 has been reviewed. Whilst the BDAR is generally adequate, EHG raises the following comments.

The BDAR acknowledges that the microbat surveys were not undertaken in the appropriate season as required by the EHG survey guidelines for species credit threatened bats and their habitats. The microbat surveys identify three bridges to be moderate potential habitat, and the BDAR recommends that if during construction, microbats are observed exiting the bridge, then works should be ceased. However, EHG considers this would put microbats at high risk of predation if they are present. EHG notes the BDAR recommends a Microbat Management Plan (MMP) is prepared. EHG recommends that to inform the preparation of the plan, additional surveys be undertaken in accordance with the survey guidelines, at the three bridges identified as having moderate potential habitat.

It is noted the BDAR recommends that field surveys in accordance with the bat survey guidelines and Threatened Biodiversity Data Collection be undertaken in spring to determine whether Southern Myotis is using the Subject Land for its foraging purposes. EHG recommends that this be undertaken this Spring and be reported on in the Response to Submissions.

The proposal will impact areas of PCT 724 and PCT 725 in moderate condition. Table 5 of the BDAR lists several threatened flora species that occur in these PCTs but the table states that these PCTs are too degraded to support suitable habitat for any of these species. EHG considers many of these species could occur in moderate condition vegetation, and as such, their exclusion is not adequately justified. However, EHG acknowledges that the areas of PCT 724 and PCT 725 in the subject land are small and restricted, and as no threatened flora species were observed during vegetation surveys, EHG considers they are unlikely to be present.

Opportunities to further avoid impact should be considered. Consideration should be given to the consolidation and or relocation of proposed temporary construction facilities to reduce the amount of vegetation clearing required to support these facilities.

Further to the above, EHG has also reviewed the urban design, landscape, and visual impact assessment (the landscape assessment) prepared by Aecom, dated 28 June 2022. The landscape assessment proposes River-flat Eucalypt Forest revegetation below and adjacent to several bridges.

EHG supports this action however recommends these areas be subject to a vegetation management Plan (VMP) that is developed and implemented by a suitably qualified ecologist in consultation with a bushland regenerator. Plant species used in any regeneration works should be local provenance native species representative of the plant community type (PCT) present in each location (as identified in the BDAR). In addition to revegetation the VMP should address other management issues such as weed management, erosion and sediment control/bank stabilisation, rubbish removal and habitat supplementation.

The landscape assessment also identified opportunities for further tree planting. The species identified for use in these locations (table 8) should be representative of the existing PCTs present (if any) within the proposed planting area. EHG notes that two Acacia species are proposed for these areas however as these are generally short-lived species, from a management and safety perspective they may not be appropriate for use adjacent to the motorway.

Flooding

EHG has reviewed Appendix G Surface Water and Flooding Impact Assessment. From EHG's perspective, the methodology utilised in the FIA prepared by Lyall & Associates appears to follow accepted floodplain risk management practice.

The flood impact assessment is adequately detailed. The consultants have developed a set of flood models including RAFTS and DRAINS hydrologic models for inputs into hydraulic models. TUFLOW hydraulic models have been developed in the vicinity of the project for Cabramatta Creek, Ropes Creek, Eastern Creek, and their relevant tributaries. The models have been utilised to determine existing flooding behaviour and post developed flood behaviour for the full range of flooding.

The assessment identifies potential impacts of the proposed modification on flood behaviour and provides measures for flood mitigation during construction and operation phases.

The potential impact of climate change has been addressed.

However, EHG provides the following comments regarding the validation of the base case models:

- The FIA utilises *Cabramatta Creek Flood Study and Basin Strategy Review* (Bewsher Consulting 2010) as the basis for the FIA base case scenario. EHG has previously informed the proponents that Liverpool Council is currently undertaking an update to the 2010 flood study and are willing to provide information to TfNSW. The base case model should be verified against council's updated flood study data.

- Ropes Creek is part of South Creek Catchment, the base case model should be verified against the Wianamatta South Creek flood Study existing condition (Revision I).

- The FIA utilises hydrological model based on WMAwater 2013 and hydraulic models Catchment Simulation Solution 2014 (CSS) as the basis to their assessment. It should be noted that the hydrology model undertaken by WMAwater has been updated by CSS. EHG is not sure if the updated XP-RAFTS hydrological model has been utilised.

A simple verification exercise at relevant spots/hydraulic structures in the vicinity of the project would be sufficient.

Should you have any queries regarding this matter, please contact Shaun Hunt, Senior Conservation Planning Officer via shaun.hunt@environment.nsw.gov.au or 02 8275 1617.

Yours sincerely

S. Harrison

30/08/22

Susan Harrison
Senior Team Leader Planning
Greater Sydney Branch
Biodiversity and Conservation

Appendix C-3 – NSW Environmental Protection Authority

DOC22/735935 26 August 2022

Jonathan Kerr
Senior Planning Officer
Transport Assessments
Department of Planning and Environment

(via the Major Projects Planning Portal)

Dear Jonathan

M7 Motorway – Mod 6 Widening – (SSI 663 Mod 6)
EPA advice on EIS for the modification

I am writing to you in reply to the Department of Planning and Environment's (DPE) invitation to the NSW Environment Protection Authority (EPA) to provide comment on the Environmental Impact Statement (EIS) for the above modification request to widen the M7 (former Western Sydney Orbital) across 26 kilometres between Oakhurst/Glendenning in the north and Prestons in the south

The EPA understands that project involves:

- widening the existing four lane motorway to six lanes (one extra lane in each direction) by extending predominantly in the median;
- widening 43 existing north-bound and south-bound bridges, including sub-structures;
- vegetation clearing and removal in the widening and construction areas;
- upgrades and additions to existing noise walls;
- utilities works and upgrades to draining infrastructure; and
- adjustments to Intelligent Transport Systems to accommodate the new lane configurations.

Based on the information provided, the proposal will require an environment protection licence (EPL) under the *Protection of the Environment Operations Act 1997* (POEO Act) under clause 35 of Schedule 1 for Road construction. Under clause 35, an activity requires a licence for construction of roads (including the widening or rerouting of existing roads) and any related tunnels, earthworks and cuttings, that has four or more traffic lanes for a continuous length of at least 1 kilometre – where the road is in a metropolitan area and is classified, or proposed to be classified, as a freeway or tollway under the *Roads Act 1993*.

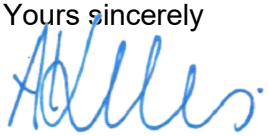
The EPA has reviewed relevant EIS documents including:

- *Westlink M7 Widening Modification Report*, (Modification 6), prepared for TfNSW, dated 3 August 2022 (the Modification Report)
- *Noise and vibration technical Report*, prepared by AECOM, dated 28 July 2022 (the NVTR)
- *Surface Water and Flooding Impact Assessment*, prepared by Lyall & Associates, dated July 2022 (the SWFIA)
- *Contamination Impact Assessment Technical Report*, prepared by AECOM, dated 14 July 2022 (the contamination assessment)

Attached at **Appendix A** are the EPA's comments on noise and vibration, surface water quality, and contamination.

Should you require clarification of any of the above please contact Anna Timbrell on 9274 6345 or email anna.timbrell@epa.nsw.gov.au

Yours sincerely



ALEKSANDRA YOUNG
Unit Head
Regulatory Operations Metro

APPENDIX A

1. Noise and Vibration

The EPA review of the *Noise and Vibration Technical Report* (NVTR) focussed on the noise mitigation measures in the NVTR.

It is noted that extensive works will be required outside the standard construction hours in the *Interim Construction Noise Guideline* (EPA, 2009) (ICNG) to limit impacts on the traffic network during peak periods, for worker and road user safety, and where a Road Occupancy Licence is needed.

Section 4.2 of the NVTR predicts significant and widespread construction noise impacts along the project route, particularly for out of hours works (OOHW). The NVTR also predicts significant potential for sleep disturbance impacts from construction activities during the night-time period. Some vibration-intensive activities may occur within the minimum distances for human comfort. While construction-related road traffic is not expected to appreciably increase existing traffic volumes on the M7, **the EPA advises that all feasible and reasonable noise mitigation and management measures should be implemented to address any noise impacts from construction traffic utilising the local road network, particularly during OOHW**.

The NVTR has indicated, in Section 4.5, significant relative increases in noise levels on the local road network where traffic detours are in place on the M7 to allow some works, such as bridge widening. While these increases (from approximately 2 to nearly 8 dBA) on local roads will most likely be clearly noticeable, they will also be accompanied – in some cases – by a corresponding reduction in traffic noise from the closure of the M7, being one of the dominant noise sources in the project vicinity. Changes of this nature are likely to give rise to community reaction and **the EPA recommends that all feasible and reasonable measures, including respite periods – such as those put forward in Section 4.5 of the NVTR – are implemented to address noise impacts from traffic that is detoured off the M7 wherever practicable**.

A range of noise and vibration mitigation and management measures and work practices are outlined in Section 6 of the NVTR, including the preparation of a Construction Noise and Vibration Management Plan which details the impacts from construction works and activities associated with the project together with measures to address these impacts. All construction activities should take place during the recommended standard hours in the ICNG wherever practicable, and strong justification must be provided for all OOHW for reasons other than convenience. A key challenge for this project will be to maintain a high degree of community engagement during the construction stage of the project and provide opportunities for the community to influence certain aspects, such as mitigation, respite periods, etc.

The EPA understands that a number of conditions in the existing Western Sydney Orbital project approval (SSI 663) are proposed to be modified, or new conditions added, to account for the proposed modification as outlined in Section 8.2, Table 8-1 of the Modification Report. A proposed change to Condition 91 relating to the installation of noise mitigation measures refers to the *Environmental Criteria for Road Traffic Noise* which has been superseded and replaced by the *NSW Road Noise Policy* (DECCW, 2011) (RNP). The EPA is not able to provide any specific advice on the appropriateness or otherwise of this proposed change as it is unclear which residences the proposed changes apply to, and the operational traffic noise impacts at those residences under the current RNP. **The EPA recommends that DPE carefully consider the implications of the proposed changes to the condition in the context of the project and the current RNP, and all conditions should be updated to refer to current policy guidance**.

2. Water Quality

The EPA's review of the *Surface Water and Flooding Impact Assessment* (SWFIA) has found that the stormwater assessment is not based on appropriate guidelines and objectives. Water quality criteria are not clear for developing post-approval plans or detailed designs for identified contaminated areas. Details are outlined below. **The EPA recommends that further information is provided on these matters to inform the post-approval management plans**. This is outlined as follows:

2.1 The proposed erosion and sediment controls do not reference relevant guidelines

Chapter 7 of the Modification Report states that "*the estimated soil loss from the proposed modification correlates to 'Soil Loss Class 2' and a 'Low Erosion Hazard' as per the classifications set out in Table 4.2 of the Blue Book (DPIE, 2004)* [sic]*"* and that *"the average annual soil loss from each area would not exceed the threshold value and therefore would not trigger the need for a sediment retention basin*".

Section 6.1.3 of the SWFIA also states that *"subject to the outcomes of the further water quality assessment during detailed design, enhanced erosion and sediment control measures may be required to meet additional site-specific discharge criteria that may be identified. These enhanced erosion and sediment control measures will need to be incorporated into the Soil and Water Management Plan (SWMP)."*

The proposed erosion and sediment controls may be suitable in uncontaminated areas. However, **the EPA recommends that *Managing Urban Stormwater: Soils and Construction, Volume 2D Main road construction* (DECC 2008) is referenced when developing the SWMP**.

2.2 The criteria for treated runoff discharging during construction is not suitable

The SWFIA adopts the *Managing Urban Stormwater Volume 1* total suspended solids (TSS) concentrations of no greater than 50 mg/L for treated runoff discharging during construction. This criterion is outdated and does not provide an appropriate basis for developing erosion and sediment controls. The SWFIA also states that: "…*further assessment would be based on the results of water quality monitoring in the receiving watercourses*" (Section 6.1.3). Water quality in potentially degraded waterways would not provide a basis for developing assessment criteria as this may result in poor environmental performance. With the proposal to not use sediment basins (where runoff can be collected and sampled) it is also unclear how discharge quality would be measured on site.

The EPA recommends that the following further information is provided:

- **Appropriate assessment criteria and how they would be measured**, including ANZG (2018) and, where relevant, *Performance criteria for protecting and improving the blue grid in the Wianamatta – South Creek catchment* DPIE (2022). It should be noted that discharge criteria for similar sites in this area of Sydney have achieved around 30 to 40 mg/L TSS.
- **How discharge quality would be measured on site.**

2.3 Mitigation measures for contaminated areas are not considered

Erosion and sediment controls based on Landcom (2004) and DECC (2008) are generally not adequate for areas of moderate to high contamination risk due to risk of dissolved and sediment attached contaminants entering stormwater. The Modification Report proposes mitigation measures including targeted Detailed Site Investigations (DSIs), implementation of a Soil and Water Management Plan (SWMP) and procedures for the management of saline soils and potential inland acid sulphate soils, that would minimise the risk of adverse impacts to ecological and human receptors during construction. The SWFIA does not consider the potential need for

different erosion and sediment controls in areas of contamination, e.g. it does not propose sediment basins or other possible options to deal with potentially contaminated runoff.

The EPA recommends the following:

- **Further information is provided on appropriate erosion and sediment controls suitable for contaminated areas and on appropriate assessment criteria and how they would be measured if discharges are proposed.** Criteria must be based on ANZG (2018) and, where relevant, *Performance criteria for protecting and improving the blue grid in the Wianamatta – South Creek catchment* (DPIE, 2022).
- **The proponent considers options to avoid contaminated stormwater discharges in the first instance.**
- **Any proposed controlled discharges are adequately treated to achieve the appropriate ambient water quality outcomes based on ANZG (2018) and, where relevant, DPIE (2022).**
- **The proponent considers the need for stormwater containment/basins or other mitigation measures to prevent contaminated stormwater entering waterways.** Any basin used must be appropriately sized to mitigate risks identified through the detailed site investigation and that managed overflows only occur as a result of large rainfall events.
- **Appropriate management criteria and responses to identify and manage water pollution risks associated with potentially contaminated stormwater are developed.**
- **The proponent includes surface water monitoring in moderate to high contamination risk areas that include all pollutants potentially present at non-trivial levels.**
- **Enhanced sediment and erosion controls are implemented as a precautionary approach in identified lower contamination risk areas.**

2.4 More information should be provided on the Dewatering Management Plan (DMP)

The SWFIA proposes that, during detailed construction planning, a dewatering management plan (DMP) would be prepared that sets out the procedures for the discharge of surface water runoff that is retained in sediment controls and exposed excavations. The DMP would be prepared in accordance with the *Technical Guideline – Environmental Management of Construction Site Dewatering* (RTA 2011).

The EPA recommends that further information is provided on a dewatering assessment based on ANZG (2018) and DPIE (2022), in particular in areas of contamination, including the assessment criteria and management measures to achieve the criteria, e.g. management of any leached pollutants from contaminated soils into stormwater collected in workings, including collection and treatment or disposal offsite.

2.5 Management of contaminated groundwater must be considered

A total of forty-three bridges at twenty-three locations would require widening as part of the proposed modification. The Modification Report states that there is potential for contaminated groundwater to be encountered while bridge pilings are being constructed. It is a requirement under Transport for NSW's *QA Specification B59* that temporary casings are to be used if groundwater is encountered during construction works. The use of temporary casings would reduce the volume of groundwater required to be dewatered. The extracted groundwater is expected to be disposed of off-site.

The EPA recommends:

- **that temporary casings are used during construction works;**
- **that *Managing Urban Stormwater, Soils and Construction, Volume 2D: Main road construction* is referenced when developing the proposed SWMP for these bridges and where relevant, *Managing Urban Stormwater: Soils and construction - Volume 2A - Installation of services*; and**
- **that extracted contaminated groundwater is not discharged to waters.**

2.6 Appropriate assessment criteria for operation stage stormwater must be considered

The Modification Report generally concludes that there is negligible difference in the ability of the current operational stormwater quality controls to meet the water quality objectives between pre- and post-proposed modification conditions. The report also states that: "*in the instance that during detailed design it cannot be demonstrated that the existing operational stormwater quality controls would be effective in mitigating potential impacts in accordance with the above requirements, then additional mitigation measures would be identified and implemented. Such measures may include the provision of additional measures such as pollutant control devices upstream of the existing controls or the conversion of a small number of existing water quality basins to bioretention basins that are highly effective in the retention of TP and TN. Mitigation measures identified in Section 7.5.6 (of the Modification Report) would be implemented*."

The EPA recommends that further information is provided on the use of appropriate assessment criteria, i.e. based on ANZG (2018) and, for waterways in the Wianamatta – South Creek catchment, *Performance criteria for protecting and improving the blue grid in the Wianamatta – South Creek catchment* (DPIE 2022). These criteria should form the basis of the detailed design assessments when reviewing existing operational stormwater controls.

3. Contamination

The contamination assessment is a preliminary investigation involving a desktop review of current and previous land uses along the alignment with a mixture of historical aerial review, maps, business directory records, and previous site investigations across the study area.

The assessment noted limited information regarding the construction of the existing M7 Westlink. Available investigations undertaken prior to the construction of the motorway (pre-2003) indicated that site inspections and intrusive soil investigations were conducted at areas considered to be high risk of contamination from site activities. However, not all reports for these investigations were obtained, and available information was limited. As such it is not known if identified contamination was remediated. The assessment has assumed that contaminated material was either taken off site or remains inside the existing M7 corridor in isolated areas. As an example, the report notes there is anecdotal evidence that contaminated material is capped under a mound at the M5 interchange (south of the project).

Similarly, there is no information regarding the source of imported fill material. The report has assumed it is either virgin excavated natural material (VENM) or excavated natural material (ENM).

The report divided the alignment into five precincts and assessed the likelihood of risk from contaminants of potential concern at three work areas: along the median, at bridge widening locations, and at ancillary facility sites. This was presented in Tables 17, 18 and 19 of the contamination assessment report, with source areas of potential contaminants identified from current and prior land uses. The areas of potential concern include a former landfill site described as 'high risk'. The EPA notes that a detailed site investigation (DSI) targeting areas of concern had commenced along the median but had not been completed at the time the contamination assessment was written. The report states that the DSI is due to be completed by mid-August 2022.

The EPA requests that the outcomes of the detailed investigation(s) be provided as part of a Response to Submissions to indicate whether contamination has been found to be present, if the nature and extent of that contamination has been determined, and if remediation is required.

The EPA also recommends that an Unexpected Finds Protocol be prepared to ensure that any unexpected contamination encountered during construction works are appropriately managed.

Appendix C-4 – Heritage NSW

Mr. Jonathan Kerr
Senior Planning Officer
Infrastructure Assessment
Department of Planning & Environment
Email: jonathan.kerr@planning.nsw.gov.au

Your reference: SSI-663
Our reference: DOC22/642717

Dear Jonathan,

Advice on Modification - State Significant Infrastructure (SSI-663) - M7 Motorway (Mod 6 Widening) (Blacktown)

Thank you for your referral uploaded to the Major Projects Portal on 3 August 2022, seeking advice on the proposed modification in relation to the above State Significance Infrastructure (SSI) proposal. Heritage NSW has reviewed the Environmental assessment - Aboriginal heritage component as requested and make the following comments.

Heritage NSW understands that a detailed Aboriginal cultural heritage assessment has been prepared as part of the impact assessment for the proposed modification, and that this assessment is documented in the Archaeological Survey Report (ASR), included in Appendix I (Aboriginal cultural heritage ASR). The methodology used for the preparation of the ASR was guided by the *PACHCI* (RMS 2011b) and the *Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW* (2010), which involved a combination of desktop research, consultation with key Aboriginal stakeholders and site surveys.

I note that Deerubbin Local Aboriginal Land Council (LALC) was consulted in relation to all areas north of Elizabeth Drive, and Gandangara LALC was consulted in relation to all areas south of Elizabeth Drive. Both LALCs provided site officers for participation in the site survey undertaken to inform the assessment and assist in identifying areas of cultural heritage value. Each LALC produced their own cultural heritage survey reports, as per the PACHCI, and the management and mitigation measures provided in the ASR were developed in consultation with both LALCs. I also note that Transport for NSW (TfNSW) has undertaken an advertising campaign to engage with the Aboriginal community and gain an understanding of cultural values in the area, and that Transport will aim to embed those values in the detailed design of the proposed modification. Heritage NSW supports this stakeholder engagement initiative to aims to assist in informing the final detailed design for the modification.

I also note that the study area for this assessment was examined in relation to the construction footprint for the proposed modification, which includes those areas required for roadworks, bridge works, access for construction vehicles and plant, drainage infrastructure, noise walls, utilities and services adjustments, temporary stockpiles, temporary property adjustments and temporary construction ancillary facilities (such as construction compounds). In relation to the construction phase of the proposed M7 Widening, I note that there are 6 Aboriginal sites identified within and directly adjacent to the study area, however, none of these sites will be impacted by the proposed modification. The operational footprint of the proposed modification

will also be contained within the existing Westlink M7 lease area and includes areas required for both operation and maintenance. No impacts to Aboriginal heritage values are expected in relation to the operation of the proposed modification.

The ARS concludes that no further impact assessment is required in relation to Aboriginal cultural heritage. Based on the information provided in the ARS, Heritage NSW concurs that no additional assessment in relation to Aboriginal cultural heritage is required, and as such, further agency consultation is not required in relation to Modification 6, M7 Motorway (SSI-663).

Should you require any additional information in relation to this advice please contact me directly on 0409 394 343 or via email Nicole.Davis@environment.nsw.gov.au

Yours sincerely

Nicole Davis
Manger Assessments
Heritage NSW
Department of Planning and Environment
(As Delegate under *National Parks and Wildlife Act 1974*)
Date: 19 August 2022

Level 6, 10 Valentine Ave Parramatta NSW 2150 ■ Locked Bag 5020 Parramatta NSW 2124
P: 02 9873 8500 ■ E: heritagemailbox@environment.nsw.gov.au

Heritage NSW

Our ref: HMS ID 1296

Mr Jonathan Kerr
Senior Planning Officer, Infrastructure Assessment
Department of Planning and Environment

By email: jonathan.kerr@planning.nsw.gov.au

Dear Mr Kerr

Comment on M7 Motorway (Mod 6 Widening) modification, Western Sydney Orbital (SSI-663-Mod-6)

Thank you for your referral dated 3 August 2022 inviting comments from the Heritage Council of NSW on the above State Significant Infrastructure (SSI) proposal. It is noted that the M7 Motorway Modification Report is on public exhibition from 3 to 23 August 2022.

The proposed development modification includes:

- widening of the existing Westlink M7 median between the Kurrajong Road bridge at Prestons (south) to Richmond Road in Oakhurst/Glendenning (north), excluding the M4 Motorway/Westlink M7 Motorway Light Horse interchange
- widening of some existing Westlink M7 bridges into the median
- relocation, upgrade and establishment of drainage infrastructure
- upgrades and modifications to noise wall infrastructure
- temporary ancillary facilities.

The proposed SSI affects the State Heritage Register (SHR) item Upper Canal System (Pheasants Nest Weir to Prospect Reservoir) (SHR 01373), which is a subsurface structure running underneath the development footprint. The Upper Canal System is significant as a major component of the Upper Nepean Scheme, which has functioned as part of Sydney's main water supply system since 1888. The SHR item Blacktown Native Institution (SHR 01866) is located adjacent to the proposed development. Within the vicinity are SHR items Government Depot Site (former) (SHR 00345) and The Rooty Hill (SHR 01756).

The following reports were considered in our assessment:

- *Non-Aboriginal Heritage Impact Assessment: Technical Report* (AECOM, July 2022)
- *Westlink M7 Widening Modification Report* (TfNSW, August 2022).

As delegate of the Heritage Council of NSW, the following comments on the modification reports:

- The implementation of a robust Unexpected Finds Procedure(s) is supported.
- The heritage assessment methodology supporting the proposal is considered suitable (*Technical Report*, section 3.2).
- There is the potential for indirect vibrational impacts to the Upper Canal System during construction works. The recommended mitigation measure of vibration modelling and determining site specific minimum working distances is supported.

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- It is unlikely that there will be direct or indirect impacts to the Upper Canal System, including the No. 4 Shaft. The Cecil Hills tunnel section of the SHR item is at least 30m below the existing motorway and the proposal would involve excavations of *c*. 1m depth. Underneath the modern above-ground access point of the No. 4 Shaft is *c*. 1.5m of ballast fill, laid above the original timber and brick air shaft (*Technical Report*, section 5.1). The fill is assessed as non-significant and it is concluded that the fabric of the No. 4 Shaft would not be impacted by the proposed works (i.e. *Technical Report*, pgs. 51, 56). However, it is noted that the ballast fill is supported by "timber beams that have been present since its 1888 construction" (*Technical Report*, pg. 49). It therefore appears that these timbers may constitute original and potentially significant fabric of the SHR item. If this is the case, the assessment that "weathering of these beams may eventually result in their deterioration"would not diminish the significance of the timbers (*Technical Report*, pg. 49; SMEC Australia Pty Ltd, 2019, pg. 9). This matter is addressed by the recommended SEARS below.

It is recommended that the following SEARS is included for the modification:

Heritage and archaeology

a) An addendum Statement of Heritage Impact (SOHI) for the Upper Canal System (SHR 01373) should be prepared by a suitably qualified heritage consultant in accordance with the guidelines in the NSW Heritage Manual. The addendum SOHI should include:
    - revised heritage significance assessment, including the significance of the timber beams associated with the ballast fill and No. 4 Shaft, considered within the context of the SHR item
    - revised assessment of the impacts of the proposal on the SHR item, including consideration of the timber beams as (potential) *in situ* elements
    - revised discussion of the attempts to avoid and/or mitigate the impact on the heritage significance or cultural heritage values of the SHR item
    - revised discussion for any changes to the heritage fabric including any options analysis, including consideration of the timber beams
    - compliance with the relevant Conservation Management Plan(s).

As the proposed SSI is in the vicinity of items listed on the Blacktown LEP 2015, advice should be sought from the relevant local council.

If you have any questions regarding the above comment for SSI-663-Mod-6, please contact Dr Hana Lewis, Senior Assessments Officer, Major Projects at Heritage NSW on 9585 6323 or Hana.Lewis@environment.nsw.gov.au.

Yours sincerely

Rochelle Johnston

Rochelle Johnston
Senior Manager – Major Projects
Heritage NSW
Department of Planning & Environment
As Delegate of the Heritage Council of NSW
19/08/2022

Appendix C-6 – Water NSW

17 August 2022

Contact: *Justine Clarke*
Telephone: *0457 535 955*
Our ref: *D2022/93983*

Jonathan Kerr
Department of Planning & Environment
Transport Assessments
Locked Bag 5022
PARRAMATTA NSW 2124

Dear Mr Kerr,

Exhibition comments – Westlink M7 Widening (SSD-663-MOD-6)

Thank you for your Major Projects Planning Portal referral dated 4 August 2022, inviting WaterNSW to comment on the Modification Report (MOD) for State Significant Infrastructure project M7 Motorway (SSI-663).

WaterNSW understands that the Westlink M7 Motorway widening (MOD 6) (the project) will include widening into the median and bridges, provision of additional exit and entry ways, utility works and location changes for supporting signage and toll gantries.

WaterNSW has a vested interest in this project as the Upper Canal, which lies in a tunnel under parts of the M7 corridor, and an associated vent shaft (shaft 4) that provides access into the tunnel section of the canal, is located within the centre median of the M7. The roadway also crosses the WaterNSW Warragamba to Prospect bulk water supply pipelines. WaterNSW owns and manages these critical components of Sydney's bulk water supply infrastructure, and it is essential that during the detailed design, construction and on-going use of the motorway that there is no impact to the structural integrity of these water supply assets and that they remain safe and serviceable at all times.

WaterNSW identify that the greatest risk to our assets from the proposed road widening works is at the Upper Canal - Shaft 4. WaterNSW's specific concerns include:

- impacts of vibration
- heritage impacts to this State listed asset
- damage to the asset from ground disturbance and road widening works
- access impediments for operation and maintenance of the Upper Canal system
- sediment and erosion control, and
- water quality and drainage impacts.

It is noted that the impacts to shaft 4 are predominantly listed and considered under non-aboriginal heritage (Chapter 7.8). However, the impact assessment considered the impacts from a heritage perspective. Whilst this is extremely important to WaterNSW, the impact to the physical asset from construction and operation is also a major factor that must be

considered. It is recognised that acknowledgement of impacts to WaterNSW assets is included in the modification report (utilities – section 4.3.8, land-use and property – section 7.9.5), and mitigation measures related to impacts to our assets are included (noise and vibration - chapter 7.2, non-aboriginal heritage – chapter 7.8, land-use and property – section 7.9.5), however it is still unclear what the extent of the impact to our assets will be. As such, we reserve the right to comment on the road widening design that will specifically impact on shaft 4.

WaterNSW requests that the proponent addresses the following in their response to submissions.

- Traffic and Transport – WaterNSW access to shaft 4 during construction and operation. WaterNSW suggests that construction access arrangements be included in any Construction Traffic and Access Management Plan (CTAMP) for WaterNSW's safe access to and operation of the asset. In addition, a new mitigation measure under operational capacity could be included to address future access needs for all users.
- Noise and vibration – Heritage and other sensitive structures are more prone to vibration impacts. The Upper Canal, specifically shaft 4, is recognised in the report as being the only State heritage listed asset impacted by the works, however the noise and vibration section does not specifically recognise this impact or the asset. To ensure the link between impact and mitigation measure, the Upper Canal should be recognised as a sensitive structure.

There is potential for the road to impact on the Upper Canal if WaterNSW's requirements are not adequately met. However, WaterNSW acknowledge the ongoing consultation between the M7 project team and WaterNSW, and notes that the project team has incorporated mitigation measures in their design to address our requirements.

Based on the information provided, WaterNSW has no objection to the proposed development, and requests that the suggested conditions (Attachment 1) are considered by the Minister, if approving the project. WaterNSW requests to be consulted as a key stakeholder throughout the project and have the opportunity to review and comment on drafted conditions of consent, design plans and construction management plans.

WaterNSW thanks the Department for notifying us of all proposals with the potential to impact on WaterNSW land, assets or infrastructure.

If you have any questions regarding this letter, please contact Justine Clarke at justine.clarke@waternsw.com.au.

Yours sincerely

Daryl Gilchrist

DARYL GILCHRIST
Manager Catchment Protection

Attachment 1 – WaterNSW suggested consent conditions for SSI-663-MOD-6

General conditions

1. Implementation of the mitigation measures as stated in the Modification Report.
2. Before undertaking any work and during maintenance or construction activities, erosion and sediment controls must be implemented and maintained to prevent water pollution consistent with Managing Urban Stormwater: Soils and Construction Vol 1 4th ed. by Landcom, 2004 (The Blue Book).
3. The Proponent, where liable, must rectify any property damage caused directly or indirectly (for example from vibration or from groundwater change) by the work at no cost to the owner. Alternatively, the Proponent may pay compensation for the property damage as agreed with the property owner. Rectification or compensation must be undertaken within 12 months of completion of the work unless another timeframe is agreed with the owner of the affected surface or sub-surface structure or recommended by the Independent Property Impact Assessment Panel (IPIAP).

WaterNSW specific

4. The proponent must consult with WaterNSW regarding design, construction and operational management where the proposal interacts with bulk water supply infrastructure, ensure that proposed construction and operational agreements are consistent with the "Guideline for Development Adjacent to the Upper Canal and Warragamba Pipelines" (WaterNSW, 2021), and implement all practical measures to protect the bulk water supply infrastructure, or as otherwise agreed to by WaterNSW.
5. Consultation with WaterNSW during detailed design should include (but not be limited to) consideration of the following:
   a) ground disturbance near shaft 4
   b) safe construction and future access arrangements for WaterNSW Operations to access and maintain shaft 4
   c) stormwater runoff management and modelling – WaterNSW will not accept any introduced surface water flows into the Upper Canal via Shaft 4.
6. Consultation with WaterNSW during development of the Construction Environmental Management Plan (CEMP) and relevant sub-plans. The CEMP should include (but not be limited to):
   a) measures to protect Upper Canal water supply infrastructure at Cecil Hills Tunnel, including shaft 4, and to enable WaterNSW to access this infrastructure at all times
   b) reference to relevant measures outlined in the current 'Guidelines for development adjacent to the Upper Canal and Warragamba Pipelines' (WaterNSW, September 2021)
   c) vibration monitoring and management
   d) groundwater monitoring
   e) water quality monitoring
   f) stormwater runoff management
   g) access provisions

h) erosion and sediment controls developed in accordance with the relevant requirements of Managing Urban Stormwater: Soils and Construction - Volume 1: Blue Book (Landcom, 2004).

7. Consultation with WaterNSW during development of the Cultural Heritage Management Plan (CCHMP) prepared for the project as part of the CEMP.
8. During construction and operation, specific mitigation measures must be implemented over WaterNSW infrastructure to achieve the vibration limits set out in the German Standard DIN 4150-3: Structural Vibration- effects of vibration on structures (for structural damage).
9. During construction and operation, provide safe and unobstructed access for WaterNSW plant and personnel to access the Upper Canal - shaft 4 and Warragamba Pipelines Corridor, 24 hours a day, 7 days a week.
10. Advise WaterNSW of any proposed amended or modified encroachment that could potentially impact the Bulk Water Supply Infrastructure.
11. Notify any incidents that affect or could affect WaterNSW bulk water supply infrastructure to WaterNSW on the 24 hour Incident Notification Number 1800 061 069, as a matter of urgency.

Appendix C-7 – NSW Health – Western Sydney Local Health District

Western Sydney
Local Health District

Centre for Population Health
'Gungurra' Building 68, Cumberland Hospital
5 Fleet Street, North Parramatta
LBM 7118 Parramatta BC NSW 2124
Tel 9840 3603 Fax 9840 3608

11th, August 2022

Johnathan Kerr
Contact Planner for M7 Motorway
(Mod 6 Widening)
Planning and Assessment
Department of Planning and Environment
Locked Bag 5022
Parramatta NSW 2124

Dear Mr Kerr,

RE: M7 Motorway (Mod 6 Widening), Application Number SSI-663-Mod-6
Opportunities to enhance health and wellbeing

The Centre for Population Health (CPH), Western Sydney Local Health District (WSLHD), thank you for the opportunity to provide a submission on the proposed widening of the M7 Motorway.

Chronic health conditions such as, diabetes, overweight and obesity, cancer, heart disease and mental illness are the leading cause of ill health and hospitalisation within our community. The prevalence of these risk factors is in turn determined by several *social and environmental* determinants of health such as education, housing, transport, employment, social networks and access to healthy food.

While the links between these health determinants and planning are complex, there is a substantial body of evidence linking the built environment to health and wellbeing outcomes of the community, particularly in the following three domains of: getting people active, connecting and strengthening communities, and providing access to healthy food options.[1]

Based on evidence relating to how the built environment impacts population health outcomes and the information provided:

- CPH recognises the opportunity the widening of the M7 offers for additional active transport links that provide a connection <u>across</u> the M7. While there are 37 entry/exits onto the M7 cycleway within the Blacktown LGA, only seven provide a connection across the M7. Additional connections would enable movement across the M7 linking neighbourhoods severed by the motorway.

  Connections across the M7 would increase opportunities for people to be active, use active transport for local trips and increase community connectivity. This would provide additional health and wellbeing benefits and help address further the negative health and wellbeing impacts of operation identified in Chapter 7.12; decreasing cardiovascular health, increasing isolation and reducing the sense of community and community cohesion. The current proposal seeks to address these negative health impacts only through reduced congestion.

CPH is aware that Blacktown City Council have identified four points along the M7 that would provide improved active transport access and connect communities to each other and to the regional open space network:

- two near Richmond Road connecting the Western Sydney Regional Parklands to the Eastern Creek Corridor and the Northwest Release Areas
- two at Rooty Hill connecting communities either side of the M7 and enhancing the connectivity of the Great West Walk.

CPH is also aware that additional links to Western Sydney Parklands are needed, including:

- a new link across the M7 from the northern end of Precinct 1 - Nurragingy to the Eastern Creek Corridor, heading up to the Northwest Release Area precincts
- a connection from the M7 shared path to the Wallgrove precinct, part of which is currently sandwiched between the Great Western Highway and the M4.

CPH supports the provision of all these active transport connections.

- CPH commends the consideration of climate change impacts in Chapter 7.14. CPH has a particular interest in mitigation of extreme heat in Western Sydney, with heatwaves being the biggest killer of all natural disasters in Australia.[2] In Western Sydney, work in the area of urban heatwave management and prevention is underpinned and guided by the *Turn Down the Heat*, Strategy & Action Plan (2018), developed and led by Western Sydney Regional Organisation of Councils (WSROC), supported by WSLHD and local Councils. The associated resources Urban Heat Planning Toolkit and Cool Suburbs Tool provide landuse planning considerations, strategies and measures to reduce urban heat for development in Western Sydney.

- CPH support the consideration of opportunities for additional shade for road users who may be exposed to high temperatures for prolonged periods (e.g. breakdown bays), Table 7-109, CC2 Mitigation Measures. CPH recommends that additional shade (natural and/or built shade) also be extended to users of the shared path.

- CPH recommend further consideration of the proposal to replace the trees that are to be removed with shrubs. Table 7.10.6, notes that the replacement of trees may not be possible due to maintenance requirements but that there may be opportunities for future tree planting. From a health perspective, replacing trees with trees is preferable to shrubs. Trees provide shade reducing the health impacts of ultraviolet light[3] and heat. Shrubs also offer fewer sight lines, than trees with open trunks. Lack of sight lines can reduce people's perception of safety.[4] It is recommended that the replacement of trees with trees rather than shrubs be considered on a case-by-case basis, with replacement with trees being the preferred outcome. Consultation with WSROC and Blacktown City Council and their work on Climate Resilient Street Trees is recommended.

Please contact Health Promotion's *Partnerships and Healthy Places* team, for further information or clarification on points raised in this letter. Contact: Elizabeth.leece@health.nsw.gov.au

With kind regards,

Dr Shopna Bag
Director Population Health
Western Sydney Local Health District

References:

1. Kent J, Thompson SM and Jalaludin B. *Healthy Built Environments: A review of the literature*. Sydney: Healthy Built Environments Program, City Futures Research Centre, UNSW; 2011. Report number; ISBN: 978-0-7334-3046-6.
2. Coates L, Van Leeuwen J, Browning S, Gissing A, Bratchell J, Avci A .2022, *Heatwave fatalities in Australia 2001 – 2018: An analysis of coronial records*. International Journal of Disaster Risk Reduction 67,102671.
3. Parsons, P., Neale, R., Wolski, P. & Green, A. 1998, *The shady side of solar protection*, Medical Journal of Australia, 168: 327–330.
4. NSW Ministry of Health, *Healthy Built Environment Checklist: A guide for considering health in development, plans and proposals*. Sydney: NSW Ministry of Health; 2020. ISBN: 978-1-76081-302-4

Appendix D – Submissions from community, local Council, special interest groups, and businesses

Appendix D-1 – Community submissions

Submitter ID	Submission Id	First Name	Last Name	Submission
S-46906473	SE-46906474	Mark	Saidden	This project is long overdue. However there should be at least 4 lanes each way on the M7 along with upgrades to existing surrounding infrastructure. A wider motorway means nothing if vehicles are not able to enter/ exit effectively
S-47065956	SE-47065957	Robert	Thomsett	I support this project however there are two points I would like to make. I believe adding an additional lane is a really ineffective solution to the current traffic issues on the M7. The road is already struggling to cope with traffic and adding an additional lane will certainly assist but by the time it is completed it will provide little or no relief. Widening with an extra 2 lanes in each direction would at least provide extra future capacity and is more inline with the Governments objective of providing infrastructure for the future. An extra one lane each way will barely provide infrastructure for the current environment. At the very least it should be 4 lanes each way between the M4/M7 Interchange and the M7/New Airport exit interchange as this section of motorway will be under significant pressure when the airport opens. The proposed additional lane will not cope with the anticipated traffic increase once the airport opens. The other concern I have is the Northbound M7/M4 interchange where an additional exit lane is proposed from the M7 to the M4. I have attached a diagram of the interchange and I have numbered the relevant lanes that I wish to talk about. There is already congestion at this interchange because of the short Northbound on-ramp from Old Wallgrove Road. Traffic entering via this very short on-ramp have to merge to lane 1 of the M7. Some of the traffic in lane 1 will exit at the M4 and other traffic will continue on the M7. At the same time vehicles travelling northbound on the M7 in lane 2 are attempting to change to 1ane 1 so that they too can exit toward the M4. Under the new proposal traffic travelling northbound in 1ane 1 of the M7 will be required to exit at the M4. This means that traffic entering the M7 from the short Old Wallgrove Road on-ramp will not only have to deal with traffic already on the M7 changing lanes but they will then need to change to lane 2 of the M7 if they wish to proceed straight ahead. With the exit to the M4 being widened to 2 lanes it is also highly probable that some traffic in lane 3 of the M7 will cut across to lane 2 so as to take the exit on the lane I have labelled on the attachment as E2. At 80kmh this is likely to cause significant issues not unlike the issues experienced at the M4/Church Street exit where people are making last minute lane changes to exit. The issues outlined above will significantly slow traffic in this section of the Motorway and add to the likelihood of crashes or other incidents. The original design of this section of Motorway was poor to begin with and these proposed changes will only make a bad situation worse. While more expensive perhaps the safer option is to have a dedicated exit lane to the M4 start before the Old Wallgrove Road interchange and run parallel to the M7 on the western side of the Old Wallgrove Rd on-ramp so as to avoid the issue of traffic having to merge and then change lanes in a very short space. Alternatively traffic entering the from the Old Wallgrove Road on-ramp could be forced to exit at the M4. Traffic from Wallgrove Rd wishing to travel north on the M7 could enter via a new on-ramp connection which could be built on the northern side of the M4 connecting with the existing M4 eastbound exit for vehicles exiting the M4 to travel north on the M7. There are no doubt other solutions also available. Thank you for considering my submission.
S-47074959	SE-47074960	Graham	Pahl	I am fully supportive of the need to add an extra lane to the M7 in both directions. However the bottlenecks at the M5 and the M2 are still two lanes so this will create a further hold up. The M7 needs to be made toll free. This road is mismanaged, this is evident by two landslides on the motorway which have permanent speed restrictions because they can't be bothered fixing them in a timely manner. The motorway needs to be seized by the state and the tolls eliminated.
S-47131706	SE-47131707	Withheld	Withheld	I support this project however it should have been done from the original construction/design. Plans need to be made that have area and vehicular growth in mind. This needs to be done with the upcoming plans
S-47155961	SE-47155962	John	Kelman	I strongly object to the Westlink M7 Widening project, which will remove access to 26 kilometers of well surfaced, well graded, safe road from use by cyclists. When the M7 was built, it was intentionally constructed with smooth, debris-free shoulders of adequate width and safe treatments at interchanges, specifically marked for the purpose of safe cycling. As a result, the existing M7 shoulders are well known and well used by cyclists riding for fitness, training and transport, as confirmed by the heatmap shown on Strava at https://www.strava.com/heatmap#17.26/150.85248/-33.80999/bluered/ride (attached), which clearly indicates significant use of both the shoulders and the shared path. The shared path is exactly that - shared, with pedestrians, children, prams, scooters, joggers, runners and family and recreational cyclists. The shared path is inappropriate and dangerous for cyclists wishing to train for fitness, due to these other uses and due to the frequent, low speed corners, side entrances and narrow sections. The modification report states: "To address potential safety risks to cyclists, the proposed modification would introduce restrictions which would prohibit cycling on the shoulder of the Westlink M7 mainline between the M5 Motorway and Richmond Road". In other words, the design of the proposed widening will make the road dangerous for cyclists, so cyclists will be banned. This is a lazy, irresponsible approach to road modification design, and would be a decision to deliberately remove existing, publicly funded infrastructure. In the current publication Cycling Aspects of Austroads Guides (https://austroads.com.au/publications/road-design/ap-g88-17): Section 2.4.5 discusses the need â€œto provide more than one cycling facility on the same route to allow for differing skill levelsâ€ and defines the â€œAdvancedâ€ rider level (experienced commuter, experienced sports rider, experienced touring rider). It states that â€œFacilities should be designed and well maintained to facilitate reasonable and high riding speedâ€ and includes sealed shoulders as suitable infrastructure for this rider type. Section 2.7 states â€œIf bicycle facilities such as cycle tracks or bicycle paths are poorly designed without appropriate directness and priority, on-road bicycle lanes or suitable road shoulders may still be required in addition to off-road facilities.â€ I submit that the M7 Widening project must not be approved until such time as the design includes the continued provision of a safe, sealed wide shoulder suitable for cyclists along the entire length of the M7, as currently exists.
S-47181472	SE-47181473	Withheld	Withheld	Can you please maintain the shared path open at all times during the M7 widening construction period and include new shared paths as part of the design Thanks
S-47207990	SE-47207991	James	Pugh	I very much support the project make it 4 lanes each way please, or at least 2 km merging lanes for all entry and exits. The roads are critical to city growth, and larger freeways promote a greener environment, free flowing traffic instead of 20km parking lots. Do it properly for dont skimp out it will cost double for the same outcome in 20 years. I look forward to seeing the forcasted costing and studies that conclude 1 additional lane each way

Submitter ID	Submission Id	First Name	Last Name	Submission
S-47343706	SE-47343707	Con	Kollios	While having over 10years experience with this motorway including both operations and commuting, motorist exhibit frustration when reduced speeds are required to perform maintenance / repairs in assets. While taking into consideration the safety requirements to perform these activities along with a varying level of intervention required per asset, could consideration please be made to the on going maintenance that will be required throughout the life of the motorway. Placing electronic assets behind jersey barriers will provide both increase improvement to safety for the technician performing the works along with negating the need to perform speed reductions, refusing frustrations. This could also sharpen response times for maintenance in assets along with reduced delays for motorists. Should a gantry system be used to install over head vsls signs, this system must act as an access point to be able to perform repair work to electronic signs without the need of traffic control devices, removing the technician from potential impact of vehicle from the road while all work is done over head with next to no disruption. Consideration to maintenance and safety for the technicians performing the maintenance along with disruptions must be considered and engineered out with this upgrade. This could serve as a standard for up comming Elizabeth drive widening
S-47380710	SE-47380711	Francesco	Vartuli	As a Resident of Middleton Grange since 2015 I must state that the road infrastructure is absolutely disgusting. I don't know how the developers, councils alongside the state gov can approve of such disasters in the first place without planning anything properly. Typically cramming blocks of land on top of one another and with small roads not even a truck could pass through. The M7 widening is well over due and and in my opinion this should have been done originally when it was built to compensate for a rapid growing city. I ask that the teams/departments involved with the project to look into bettering existing roads near/alongside M7 etc. Further improvement can be done on roads such as 15th Avenue, West Hoxton More entry, exit points at Middleton Grange Devonshire Road/Elizabeth Drive Austral/Kemps Creek Wallgrove Road/Elizabeth Drive Intersections The Widening of M7 must be done I am all for it. But please do not hike the prices of the tolls no one can justify paying ridiculous amounts for Motorways promised to cut travel times. Please donâ€™t state this will as I still think this wonâ€™t help congestion across the orbital link, especially once airport opens up. I am using this platform to get a message across not just regarding the M7, but the suburbs between the M7 and Western Sydney Airport. As we will be feeling the consequences a lot more with traffic congestion. All these sub divisions happening in Austral etc have roads with no proper storm water systems, still travelling on roads that are over 30+years old with over hundreds of pot holes. Housing estates are popping up left and Center with no proper roads to compensate. Please consider and plan properly
S-47389469	SE-47389470	Withheld	Withheld	It is already noisy and Widening the road will increase the noise pollution,and increase risk of accidents.
S-47396973	SE-47396974	Withheld	Withheld	Too much noise with least police patrol in speeding.
S-47397457	SE-47397458	Withheld	Withheld	Hard to control the noise and air pollution with trucks and big vehicles.
S-47439737	SE-47439738	Withheld	Withheld	I am supportive of the M7 widening which is long overdue (the road should have originally been built with 3 lanes each way at a minimum). Rather than continual widening and disruption again in the future, this opportunity should be used to widen the road to 4 lanes each way to avoid the mistakes of the past, particularly between the M4 and M5 interchanges. In addition, the M7 should be widened to at least 3 lanes each way right through to the M2 at Windsor Rd. There is already considerable congestion past the M7/Richmond Rd interchange through to the M2 at Windsor Rd and it would be a mistake to leave this as 2 lanes each way.
S-47441486	SE-47441487	Withheld	Withheld	The current noise is unbearable so can't handle more. Speed on motor ways cause fatal accidents and more lanes will encourage speeding.
S-47441972	SE-47441973	Samuel	Page	Got to be 4 lanes each way
S-47446961	SE-47446962	Withheld	Withheld	All future motorways need to have minimum 3 lanes on both sides. M4, M5 and now M7 are all needing upgrading 8-10 years
S-47466467	SE-47466468	Shafeel	Ali	I think it is essential to connect Middleton drive to Aviation road underneath or above the M7 motorway as part of the widening project. Currently there is only one entry and exit out of the parkbridge estate in Middleton Grange, and I believe it is not safe for the residents of the estate incase of major emergency like a bushfire. The estate is surrounded by western Sydney parklands. This road was planned to be connected years ago and yet nothing has happened. Please consider this connection as part of the overall widening project of the M7 motorway. Thanks Shafeel Ali

Submitter ID	Submission Id	First Name	Last Name	Submission
S-47536458	SE-47536459	Matthew	Rodgers	I'd like to provide my feedback regarding the widening of the M7 Motorway for consideration. Lighthorse Interchange The southbound on ramp from M4 Westbound to Southbound M7, and the Southbound Offramp to Old Wallgrove Road has a duck-n-weave issue. Simply widening an extra lane here will not remove this problem, though will further exacerbate it. This issue is proven on the M5 Westbound between Moorebank Ave and the Hume Highway. Have considerations been given to a dedicated lane from the M4; o To continue a dedicated lane from the M4 ramps along and merge with the on ramp at Old Wallgrove road making that the primary ramp with 2 lanes entering the M7. o A mouse hole type arrangement from the M4 ramp to bypass such as the project of the M5 between Heathcote Road and the Hume Highway. o Duel lanes exiting the M4 Southbound onto M7 rather than single lane. Horsley Drive Interchange The southbound on ramp from Horsley Drive to Southbound M7 creates queuing issues on the mainline. Widening an extra lane here will not remove this problem. Have considerations been given to; o To extend the acceleration on the on ramp lane to allow heavy vehicles to merge at safer speeds. M7 Mainline â€“ Northbound - Between Shared Path overbridge north of Cowpasture to Elizabeth Drive There is a clear need for 4 lanes northbound in this location due to the steep incline that heavy vehicles must transverse. Have considerations been given to; o Have a Fourth dedicated â€˜Truck Only Laneâ€™ in this area to future proof growth, particularly as the M12 junction is joining at the base of this hill. o An extra breakdown bay half way up the hill. M7 on ramp " Northbound " from Hume Motorway to Toll Gantry There is a clear need for 2 lanes northbound in this location to continue further than existing arrangements. Currently it has only 1 which has a significant amount of traffic volumes coming from the Hume Motorway and Camden Valley Way. Have considerations been given to; o Include widening in this area to have 2 dedicated lanes from the Hume Motorway/Camden Valley Way to the toll gantry. o Extend the current lane 1, which terminates from the ramp to past the toll gantry. M7 off ramp " Southbound " from M7 to Hume Motorway/M5 There is a clear need to widen this location due to heavy congestion due the traffic exiting from the M7. Have considerations been given to; o Widen the M5/Hume Motorway east bound at the M7 junction on ramp to have 4 lanes to Kurrajong Road overpass. o Extend the already existing acceleration lane from the M7 on the Hume Motorway to Kurrajong Road overpass. Whole project Has ˜Ramp Metering" and ˜Smart Lane Technology" been given consideration to control traffic flow and speeds as part of this widening. This has been highly successful on the M4 Motorway.
S-47541206	SE-47541207	Withheld	Withheld	Support project. Note stopping bays will not be impacted. Currently virtually impossible for heavy vehicles who need a large vehicle gap to re enter motorway in peak hour. Suggest merge lane be included for traffic efficiency. An alternate is to remove stopping bays and provide a single rest area with space for multiple vehicles in either direction (15-20 spaces)
S-47605220	SE-47605221	Withheld	Withheld	I am in full support of the proposed widening of the M7. I hope the proposal includes widening to a minimum of 4 lanes in each direction. The road at the moment is totally inadequate and more attention to the merge and exit lanes is also required. The merge and exit lanes will take up 1 lane, there for we need a minimum of 4 lanes to allow 3 lanes of traffic to flow. Also there needs to be an overpass exit at the exit feeding Richmond Rd . At the moment the exit feeds into Rooty hill Rd north and causes a backup of traffic on that Rd as well as at the intersection of Richmond Rd. This causes serious delays on Rooty hill Rd north, with traffic banking back for KMâ€™s . My thought is that the overpass should go over Rooty hill Rd north and feed directly onto Richmond Rd heading west which is the direction most of the traffic is heading . The existing exit could there for still feed south bound traffic on Rooty hill Rd north and east bound traffic on Richmond Rd . I hope this proposal is looked at seriously at the moment the M7 is seriously congested often causing delays, effecting productivity and causing stress and anxiety to the general public, Thanks .

Submitter ID	Submission Id	First Name	Last Name	Submission
S-47614513	SE-47614514	David	Sellen	M7 sound barrier. My submission is in relation to Sound Barrier due to the widening of the M7, I live opposite the equestrian centre and during the construction of the M7, I approached the RTA about sound barriers , road height and road position and was refired to the construction supervisor at Pikes Ln depo in charge of the road construction, he told me I had to deal with Leighton and Abigroup this was nothing short of a nightmare. Was given no info and was told no info available due to design changes and when the sound barrier started for the equestrian centre I was ringing almost daily trying to get info on Sound barrier. I have so much info on the process but to cut short for now when the road was finished the construction supervisor at Pikes Ln came out to meet, and told me if I had spoke to him first at the beginning he could have done something about the sound barrier but at this point in time he had a new construction road the oversee and I had to wait for the review to finish in 12 months time , I did see you was my response and he just left. Many phone calls to receive action to no avail. Two years later Heggies acoustics consultant, came to tell me that the review was with in their limits. So after a long conversation he finally answered my question about the lack of sound barrier on the Western side of M7. The equestrian centre had a sound barrier running the 1km length of empty paddocks and car parks . The response was they asked for one ,I asked why didnâ€™t we get one as well when we also askedâ€¦â€¦.. The answer was that there wasnâ€™t enough houses to warrant an sound barrier. I asked about other sound barriers on the M7 like the quakers hill sewage treatment plant.. answer was the its to hide to works and the cost didnâ€™t matter. As a member of the Horsley Pk Protection Co-operative Ltd before and during this process of the M7 we as directors meet with RTA rep in a public meetings and in office. The Horsley Pk community was give assurances that any New roads would have sound barriers that was their policy. M7 widening needs a sound barrier on western side of Wallgrove Rd Horsley Pk 2175 from Horsley Dr to Saxony Rd the same length of Equestrian centre before any road works start due to the high road noise and truck exhaust braking at all hours of day and night, this will only increase due to construction . With higher then normal traffic on Wallgrove road now due to the M7 parking lot ,with most trucks and cars using this road to avoid M7 the speed limit on Wallgrove Rd Horsley Dr Village intersection needs to be reduced to 60kph 500 meters both sides of the intersection to slow these heavy vehicles down. Two school one on the corner and the other 50meters up the road, we had one major accident with a truck in the last month on Wallgrove Rd. David Sellen
S-47614513	SE-47616958	David	Sellen	M7 upgrade . M7 road upgrade, This upgrade will affect not only the local traffic that has been impacted by all the heavy vehicle traffic bypassing the M7, using Wallgrove Road north to the M4 and south to Elizabeth Drive. Firstly Wallgrove Rd from M4 to Wonderland Dr to Old Wallgrove Rd and Mini Link Rd, all heavy vehicle traffic in and out of this area blocks local traffic on Wallgrove Rd to no end ,backing up to M4 . The small section of road from Wonderland Dr to Mini Link that is Hannibal St , should have been complete . This missing link which is there in its original form as a road just blocked off stops the heavy vehicles from bypassing Wallgrove Rd and going straight into Old Wallgrove Rd and onto the M7 .Which in turn blocks Wallgrove Rd. From previous history during the construction of the M7 local residents and traffic was back up for long periods, now due to all the extra industrial traffic it will be a night mare as there is no other way around this other then Mamre Rd which is also under road works. Second, due to the traffic on the M7 it is a parking lot more often then not. During the afternoons most heavy vehicles heading south use Wallgrove Rd to Elizabeth Dr . Again the traffic is heavy and slow with Heavy vehicle pushing their way. Horsley Pk community has 2 schools on and near the Wallgrove Rd Horsley Dr intersection and a new high school just built bring more local traffic ,with all this heavy vehicle traffic on Wallgrove Rd and possible more likely extra traffic due to M7 road works the speed limit on Wallgrove road from Redmayne Rd to Cobham St should be reduced to 60 Kms. I would also like to address due to all the traffic being generated by Airport and New Industrial area feeding onto Wallgrove Rd and M7. The completion or upgrade of Archbold Rd ,M4 bridge to on and off east bound feeding into industrial estate onto Lenore Dr ,would also remove most of the heavy vehicle traffic from Wallgrove Rd. This also would intern would take much unwanted heavy vehicle traffic from Erskine Park Rd ,a residential area . Thank you David Sellen
S-47627966	SE-47627967	Lawrence	White	I have lived at my address in Horsley Park since 1995 prior to the original construction of the M7 motorway. At that time I had no experience of the noise levels created by the operation of such a development. From inception with the M7 I have endured constant road and traffic noise day and night caused primarily by the prevailing southerly winds and at a sound level that impacts my home and property quite severly and affects the previously quiet rural amenity. Whilst I do not object to the current proposal to increase the M7 traffic lanes however i do recognize the volumes of future traffic will increase noise impact on my property further. As a submission to the Department I would support a "noise assessment" be conducted at my property. Further i request that "SOUND BARRIER" walls be included in the proposed further development of this M7 motorway, particularly between the Elizabeth Drive and The Horsley Drive section of the proposal to reduce current noise impacts and protect against the increased noise issues of new traffic volumes as outlined. Not all residents in my area are noise affected..... due to property position along the roadway, local topography differences and physical local barriers such a house positioning. I am available should the Department wish to make an inspection of my property to ascertain the matters raised in this submission. Kind Regards Lawrence White [redacted]

Submitter ID	Submission Id	First Name	Last Name	Submission
S-47631217	SE-47631218	Brendan	Terrett	To Whom It May Concern, Thank you for inviting comment on this project. My primary concern relates to the inadequacy of the proposal. There simply is not enough capacity provided for future growth along the M7 corridor. As it stands, the M7 is extremely congested in most daylight hours on weekdays. I expect widening to three lanes in each direction to not provide adequate relief to this situation. As I see it, this is a very good deal for the private motorway operator who will get a few extra years on the toll concession as a result, but a very bad deal for the very unhappy motorists who will have to pay to sit in traffic. I think widening the motorway to at least four lanes in each direction is necessary to handle the traffic levels which will be generated by this rapidly growing corridor of Sydney, especially with the new Airport. Based on my observations of the M80 project in Melbourne, which roughly corresponds to the role of the M7 in Sydney (orbital motorway, services airports/outer suburbs), a far more substantial project is warranted than what is proposed here. Thank you.
S-47632210	SE-47632211	VICKY	MITTIGA	I live adjacent to the M7 motorway, approx 450m away. Although I do not object to the widening, as I see the need, we already experience excessive noise from traffic on the M7. The widening will create another 50% worth of extra traffic and the noise level will be unacceptable, unavoidable and intolerable! We feel it is imperative to install noise barriers for the entire stretch of the Motorway which has homes within close proximity which are affected by the noise. Our property sits quite high in relation to the motorway, which is why we get more noise than some. I suggest that a study is done to measure noise levels and the barriers erected accordingly. As you and I are aware, this is a standard practice in other areas and/or motorways.
S-47658005	SE-47658006	Frank	Rave	M7 widening is well overdue but please ensure consideration is given to future proofing road upgrade. I would highly recommend a 4 lane not a 3 lane widening. Current capacity already reached and a third lane will only serve the delivery of M12 and traffic for newly built airport. It will immediately be at full capacity again with a 3rd lane. Strongly suggest going straight to 4 lanes
S-47661462	SE-47661463	rosetta	arena	Rosetta Arena Address:[redacted] RE: M7 widening modification. Please consider this submission regarding the repercussions of the M7 widening project. We are in favour of the widening of Wallgrove road, although we have some concerns about the increase in noise that this will create. We have been residents on Wallgrove Road for 35 years and have endured many changes without any objection. The noise has obviously over time due to new infrastructure such as the M7 and other local developments. It is inevitable that the noise will increase further once the widening project is complete, with an increase in traffic. This is a serious issue for those such as myself who live on Wallgrove Road unless plans are made to manage the noise level. We are requesting serious consideration of this impending issue and the allowance of noise barriers or blocks to be put in place on Wallgrove road to accompany the widening project. We would appreciate your attention to this matter. Kind Regards Rosetta Arena

Appendix D-2 – Special interest groups

bike north

Making Cycling Better in Northern Sydney

Director, Transport Assessment, Planning and Assessment
Department of Planning, Industry and Environment
Locked Bag 5022 PARRAMATTA NSW 2124

Dear sir/madam,

M7 Motorway Widening - Application Number SSI-663-Mod-6

Bike North thanks you for the opportunity to review the M7 Motorway Widening Modification Report.

Attached please find our submission in response to the Modification Report. Bike North is happy to discuss these issues with you further. The best Bike North representative for this purpose is David Thomson (advocacy@bikenorth.org.au or 0419 227 213).

Yours sincerely,

Phillip Hart
President
Bike North
23 August 2022

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bike north

Making Cycling Better in Northern Sydney

M7 MOTORWAY WIDENING

Response to Modification Report

Bike North

23 August 2022

M7 MOTORWAY WIDENING

APPLICATION NUMBER SSI-663-MOD-6

Introduction

Bike North is concerned about the impact of the proposed works on the shared path beside the M7 on commuters, families, and recreational cyclists. This path is one of the most used and useful bicycle facilities in western Sydney.

It is imperative that the project team takes every step to minimise the impacts and takes the opportunity to rectify existing issues while the path is closed.

DETOUR DETAIL

Need for detours

Bike North has found, on other major projects, that the project teams give little time or attention to disrupted cycle routes. To avoid this outcome on the M7 project, Bike North requests a consultation with designers to have them brief us on why the detours are necessary. We understand that there are several works that will be undertaken close to the shared path and understand these would be more easily undertaken if the path were closed. As a start to this process, it would be useful to have a list of the works that will necessitate the closure of each section. Attached is a table in which begins this process. Can the project team please check and complete this table to confirm which works necessitate the path closure for each section. Bike North and other bike groups have access to engineers who are capable of conducting straightforward and efficient discussions about these closures with the project team. We look forward to the opportunity to understand the reason for the planned closures.

Disincentive to active transport

Bike North is concerned that the detours, through additional length and alignment, will be a substantial disincentive to active transport. In a period when this attractive route would be expected to see increases in usage, the detours will deter users and the opportunity to consolidate active transport and to increase it will be lost.

Standard of the detours

Bike North strongly recommends that the detours provided must be of equivalent safety standard to the shared path they replace. Further, it would be preferable if the detours were of the same "standard of service" as the route they replace. In most cases the routes chosen are major local active transport routes which will benefit from any improvements.

Detail of detour route and facility

Although the designers have already given thought to where the detour routes might be, these are lengthy routes (one over 7km). Bike groups can provide invaluable input to the detail of these routes. In particular, to allow the routes to meet the above requirement of being of the same safety standard as the shared path they replace. Bike North requests a 'walk through' meeting with the designers. Bike North recommends that the alternate routes proposed by CAMWEST in its submission be fully investigated, including attention to the phasing of traffic signals on detour routes.

Bike North seeks to be a part of any formal consultation on this topic, for example, the Construction Contractor's Pedestrian and Cyclist Management Plan or community liaison groups.

Other impacts on the shared path during construction

Bike North recommends that the shared path NOT be used for construction traffic. There will be enough disruption to the shared path. The contractor should be able to find other forms of access.

Similarly, the project team, but particularly the contractor, must minimise the impact of the placement of ancillary facilities on or near the shared path. It will be attractive and simple to just place ancillary facilities on or near the path, but this must be avoided.

Opportunities for maintenance and remediation of shared path

If the shared path is to be detoured, this provides an opportunity to undertake maintenance and remediation of the shared path:

Flood prone section of the share path

A section of the path at the southern end, close to Prestons, is flood prone, which affects the value of the path as a commuter route as well as recreational route. Again, while the share path is closed would be an ideal opportunity to undertake the works necessary to overcome this significant deficiency in this tremendous facility.

Maintenance of the shared path

There are minor maintenance issues along the length of the shared path that will require attention in the near future. Undertaking those works while the path is closed is a great opportunity.

Other opportunities on this path

This would also be an opportunity to consider other minor upgrades on this path. For example, there are no toilet facilities on the 40km shared path. An obvious location for such a facility would the "water bubbler" adjacent to the intersection of Wonderland and Wallgrove Rds.

No cyclists on the main carriageway

If cyclists are to be banned from the main carriageway, the shared path needs to be available at all times (this could perhaps be expressed as "the alternate route that these cyclists are forced to use must be as accessible as the route they are now banned from"). This necessitates that the path must be free of flooding, which the current path is not. We cannot force bikes off the main carriageway unless the alternative is always accessible.

OVERALL PROJECT

Public transport

The median was originally earmarked for public transport, and Bike North supports the Bicycle NSW submission that the new median lanes be used for public transport. (The project team's attention is drawn to the submission of Bicycle NSW for more detail on this topic.)

Other submissions

Bike North wholeheartedly endorses the submissions of Bicycle NSW and CAMWEST.

RECOMMENDATIONS

Bike North recommends that:

Detailed design

1. The designers meet with bicycle user groups including Bike North, to discuss the need for the proposed detours and allow suggestions for alternative strategies.
2. Any detour provided be of equivalent standard of safety and preferably equivalent "level of service" to the existing route. This should include phasing of traffic signals on these routes.
3. Transport for NSW undertake a series of site visits with bicycle user groups including Bike North to walk each of the detours and examine the detail of the routes to ensure adequate planning for the safety and efficiency of the routes.
4. Bike North recommends that the shared path NOT be used for construction traffic.
5. Ancillary facilities should be placed to not impact the shared path.
6. While the section of shared path from approximately Cowpasture Rd to Kurrajong Rd is closed, flood-proofing works be undertaken in parallel with widening works.
7. As each section of the shared path is closed, the opportunity is taken to undertake maintenance and related minor upgrade works.
8. Bike North be involved in formal consultation on active transport or more general community liaison for this project.

Project scope and purpose

1. Reduce traffic congestion by using the two additional lanes for an integrated public transport service within the central median as recommended by Future Transport Strategies 2056.

Attachment - M7 Motorway Widening – Detour works

	Detour	Widening works that necessitate detour	Comment
1	Kurrajong – Bernera	Maxwell's Ck (bridge widening)	
2	Ash – Bernera	Maxwell's Ck	
3	Bernera – Hoxton Park Rd	Cabramatta Ck	
4	Hoxton Park Rd – Cowpasture Rd	Hinchinbrook Ck	
5	Cowpasture – Elizabeth Drive	Hinchinbrook Ck, Elizabeth Dr	"travel distance impact 1.3km", but total detour is approx. 7km
6	Old Wallgrove – Wonderland	Reedy Ck	
7	Woodstock – Power	Not apparent (bridge at Woodstock will be widened??)	
8	Lamb – Florence	Bridge carrying path at Florence to be altered	
9	Florence – Simms	Bridge carrying path at Simms to be altered	
10	Florence/Woodley – Simms	Bridge carrying path at Simms to be altered	

Elsewhere in the papers project staff have mentioned noise wall works. As these are often close to the shared path this may also "necessitate" a detour.

bike north

RIDE WITH US.

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M7 Motorway (Mod 6 Widening)

AUGUST 2022

Bicycle NSW | (02) 9704 0800 | info@bicyclensw.org.au | www.bicyclensw.org.au

Contents

Introduction

Thank you for the opportunity to review the Westlink M7 Widening Modification Report.

The proposed widening of the Westlink M7 prompts a re-evaluation of the road corridor and the shared path with respect to the future transport needs for Greater Sydney. The Westlink M7 shared path forms an important active transport corridor linking communities throughout Western Sydney. Disruption to the shared path during construction is inevitable. In the interests of fairness to all road users, Bicycle NSW and affiliated Bicycle User groups (BUGs) would like to know the extent to which the project plans align with fair, safe and accessible active transport.

This submission firstly considers general aspects of the shared path and Westlink M7. It will then discuss the NSW Government's reasons for widening the motorway, and how these are not reflected in current TfNSW frameworks and policies that govern infrastructure projects. There are concerns about the impacts upon active transport during all phases of the widening, particularly regarding detours. These concerns are set out with requests for more information and a series of recommendations for the project team.

We are very disappointed that the project has no ambition to leave a legacy of better cycle facilities along and adjacent to the corridor. **It is essential that the NSW Government leverages the investment in toll road infrastructure to deliver new and improved active transport facilities that will meet the active transport needs of Western Sydney, now, and into the future.**

Bicycle NSW has been the peak bicycle advocacy group in NSW for over forty-five years, and has over 30 affiliated local Bicycle User Groups. Our mission is to *'create a better environment for all bicycle riders'* from 8 to 80 years of age, and we support improvements to facilities for pedestrians and cyclists. We advocate for new cycling routes that provide connections to jobs, schools and services for daily transport and recreation trips. Bike riding provides a healthy, congestion-reducing, low-carbon, economical form of travel great for all ages with the correct infrastructure design.

In preparing this submission, we acknowledge the contributions of the Bicycle User Groups, Bike North and CAMWEST. Both groups have made detailed submissions that should be read alongside this document. Their detailed knowledge of the local area and long years of advocacy are essential to the creation, preservation and renewal of active transport infrastructure throughout Western Parkland City.

The M7 shared path

The Westlink M7 shared path is considered to be as one of the Top 10 cycleways in Greater Sydney[i]. It provides an uninterrupted, traffic light-free ride through Western Sydney, much of which via bushland reserve. The shared path is just under 40kms long and stretches from Prestons to Baulkham Hills. It runs alongside the Westlink M7 and is separated from road traffic. It has its own bridges over roads and creeks, allowing users to enjoy a continuous trip for nearly 40 kilometres.

For most of its length, the path is 4m wide giving plenty of space to both pedestrians and cyclists (Figure 1). The path provides important recreational, transport and health benefits. It integrates into surrounding pedestrian and cycle networks, offering an alternative transport option to employment areas such as Norwest and Eastern Creek. It also connects to recreational facilities such as the Western Sydney Parklands. The shared path attracts approximately 400 riders on a weekday and 1000 plus on weekends[ii].

Figure 1: The existing M7 shared path (Source: Westlink M7)

The M7 Widening

The Westlink M7, formally known as the M7 Motorway is a tolled motorway and part of the Sydney Orbital Network. The 39 kilometre-long 4-lane toll road connects the M5 Motorway at Prestons, the M4 Motorway at Eastern Creek and The Hills M2 Motorway at Baulkham Hills.[iii]

Transport for NSW is seeking a modification to the approval granted for the Westlink M7 to widen part of the motorway 'in response to current and projected future traffic growth, and to address reduced motorway efficiency and enhance safety.' The proposed modification would enable the construction and operation of an additional lane in both directions within the existing median of the Westlink M7, for approximately 26 kilometres from about 140 metres south of the Kurrajong Road overhead bridge at Prestons (southern end) to the Richmond Road interchange at Oakhurst/Glendenning (northern end), excluding widening through the Westlink M7/M4 Motorway (Light Horse) Interchange.[iv]

As mentioned above, the need for the additional lanes is justified by planners as a response to the 4.5% per annum increased rate of traffic congestion expected due to population growth projected for Western Sydney, as outlined in Transport for NSW Future Transport 2056 Plan.[v]

Our knowledge of induced demand - the dynamic in behavioural economics proven repeatedly and universally since the 1960s[vi] - that increased traffic lanes increases traffic congestion, begs the question: For how long will widening the M7 by two additional lanes manage congestion? This issue has not been addressed in the planning documents.

Future Transport 2056 clearly acknowledges that 'building our way out of congestion is not a sustainable solution. Planning for a dynamic network that improves customer choices and options is key to the sustainability and resilience to our future network' (page 88)[vii]. Nudging people away from private car use involves providing for public and active transport. On this basis, the M7 EIS, drafted in 2000, identified the 15 metre wide central median as capable of meeting 'growing demand for public transport'[viii] in Western Sydney.

Two decades later and there are still no bus facilities on the M7 Westlink (page 7-8). The current modification proposal lists all the current public transport options in existence outside of the M7 such as the Liverpool-Parramatta T-way, North-West T-way, Sydney Metro North West, Sydney Metro North-West among others but claims there is no strategic need for bus services along the corridor (page 3-4). This is clearly incorrect. Since 2005, the M7 has been a line of desire for 191,000 persons on average daily[ix]. Congestion, costs and pollution are climbing. Many of these drivers would use public transport were it available. With the additional traffic lanes now planned for the central median, the M7 will in effect be a private toll road exclusively for private vehicles.

The shared path is therefore crucial to providing transport options on this major corridor.

As discussed below, Bicycle NSW is very concerned about closures and detours during the project period. Suppressing active transport over the years of construction will have a long-term impact on the ability of Western Sydney residents to develop sustainable, healthy travel habits.

It is reassuring that 'no operational changes are proposed to the location or overall alignment of the Westlink M7 shared pedestrian and cycle path as part of the proposed modification'. However, we are shocked to learn that the modifications will 'not directly improve active travel linkages and connections within the wider network' (page 7-32). This entirely contradicts the 2021 Providing for Walking and Cycling in Transport Projects Policy[x] which requires every transport project funded by Transport for NSW to include provision for walking and cycling, which must be delivered from the outset of the project. Restoring the existing shared path to the current condition, with no consideration of much needed upgrades, represents **a huge wasted opportunity to leverage the investment and disruption involved with the widening project to improve connections and facilities for active transport**.

There has never been a better time to build infrastructure for bike riding and active transport. As the new Minister for Infrastructure, Cities and Active Transport, Rob Stokes MP, set out in a recent speech[xi], 'Active travel projects that stitch the suburbs together and enable people of all ages and abilities to get around without a car are more sustainable than megaprojects.' He stressed that the NSW Government will focus on completing missing links in the active transport network. Cycling and walking projects have big benefits, and not only for reducing pollution and congestion. Active mobility improves public health, activates communities, helps build social connections and addresses inequality.

Future Transport Strategy 2056

Since the M7 opened in 2005, innovative thinking within NSW Government around 'place' has superseded 70 years of car-centric planning that focused on movement to the detriment of community, urban amenity, walkability, public health and air quality. Before discussing concerns about the proposed changes to the M7 shared path, it is worth revisiting Future Transport 2056 and the current TfNSW frameworks that guide major infrastructure projects:

Movement and Place
The concept of 'Movement and Place' underpins Future Transport 2056. It is a planning framework that ensures 'movement' and 'place' are considered together as part of a 'place-based' approach to the planning, design, delivery and operation of transport networks. Movement and Place puts our customers and the community at the centre of transport planning and delivery' (page 89). Movement and Place takes a cross-governmental integrated approach to planning and no longer considers roads and movement in isolation to community needs.

Future planning means encouraging mode shift towards sustainable transport
'Planning for the future means preserving suitable options for future uses and travel behaviours. It also means improving the way we integrate land use management, demand for travel and utilisation of all transport assets to optimise safety and performance, and maximise carrying capacity as passenger and freight volumes grow. Walking and cycling will play a key role in reducing congestion and supporting customer journeys.' (page 88)
'…ensure walking and cycling are the most convenient option for short trips to key destinations and within centres, reduce congestion on our roads and public transport networks by delivering projects that encourage a shift to walking and cycling' (page 94)

Build the 30-minute city
'Realising the 30-minute city will require a sustained and staged investment program to protect corridors and then develop an **integrated** transport system that includes city-shaping, city-serving and centre-serving corridors and strategic freight networks. It will also require more efficient use of the current network to reduce travel times and meet customer demand.' (page 126)

Supporting the Western Parkland City with more public transport
'The developing Western Parkland City will require investment in the mass transit network to shape a sustainable urban form and grow jobs, and support 30-minute access to centres by public transport.' (page 129)

Towards Net Zero means mode shift away from private car use
'To encourage more people out of their cars we need to continue to make walking and public transport more attractive options.' (page 147). New and emerging service models, such as car sharing and automated shuttles, need space on the transport network. A viable, connected public transport service on a privately tolled road would be a strong nudge away from private car use.

Social sustainability and accessibility
It is essential to ensure that transport contributes positively to society, the environment and the economy. An accessible public and active transport network will mean more choice for people with mobility constraints and will make travel easier for everyone, whatever their age, ability or personal circumstances (page 161).

For all of the above reasons, any changes to the M7 shared path must enhance rather than detract from its role as a key active transport corridor for Greater Sydney.

Shared path impacts during construction

The construction phase of the M7 widening will run for years. Sections of the shared path will be temporarily impacted by construction activities and reinstated afterwards (page 4-13)[1]. These activities will require **ongoing consultation and communication with Bicycle User Groups**. We respectfully request that TfNSW refer to the submissions of Bike North and CAMWEST for concerns raised and possible solutions.

We seek clarification from TfNSW regarding the following aspects that will affect access to the shared path during the widening of the M7:

- **Use of the shared path for construction:** Bicycle NSW asks that the shared path not be used for construction access (page 4-42). This would inconvenience and deter bicycle riders along the path with the added risk of collision between vulnerable road users and heavy construction vehicles. In line with current TfNSW policies that consider walking and cycling as priority transport modes we request that due regard be paid to the safety convenience of cyclists, just as it is for motorists.

- **Construction ancillary zone:** 'Zone' construction ancillary facilities will be established within and adjacent to Westlink M7 for stockpiling, construction support at bridge- and median-widening locations, project offices and compounds, as well as 'site' ancillary facilities within the existing motorway alignment (page 4-1). We ask that this ancillary zone not interfere with the shared path. If at any point it does intersect, how can this best be managed?

- **Detours:** There will be at least 10 detours (page 4-46). Each will add between 300m and 1.3km to the closed section of shared path (see table 1). The Modification Report acknowledges that several detours may be in place simultaneously. The Report also mentions noise wall works. As these are often close to the shared path, it is assumed additional as-yet-unspecified detours will be needed.

  Bike North notes that some detours are very lengthy. For example, detours completely reroute the existing pathway from the Prestons end of the M7, all the way to Elizabeth Drive (10km). The table is misleading – the diversions involve 300m to 1.3km additional length. For example, the detour labelled as 1,300m, is actually about *7km long*. With several detours in operation at once, there will be an unacceptable disincentive to active transport along this key corridor.

  Bicycle NSW is very concerned that not enough thought will be given to the design and signage of detours. The temporary routes are likely to provide a very different style of cycle infrastructure to the current shared path. Some may even prove unusable. This risks a huge impact on recreational and commuter usage and, given the years under construction, a setback to mode shift towards active transport.

  Please confirm the detours and the timeframes in which they will operate as soon as possible.

[1] It is noted that cyclists will be prohibited from using the roadway between the M5 junction and Richmond Rd, both during and after construction. All bike riders will need use the M7 Westlink shared path instead (page 7-32). Although some of our Members prefer to cycle on the shoulder of the motorway, Bicycle NSW agrees that it is best-practice to separate bikes from high speed traffic. Given previous fatal and critical cycling incidents, the shared path is a safer, well-lit alternative connected with the local road network.

ID	Westlink M7 shared path closed section	Detour description	Travel distance impact (meters)	Detour route assessment
1	Between Kurrajong Road and Bernera Road	Kurrajong Road and Bernera Road	300	Recommend upgrades to Bernera Road footpaths to facilitate detour
2	Between Ash Road and Bernera Road	Ash Road, Jedda Road, Bernera Road	700	Recommend improvements to Ash Road to facilitate detour and extension of Jedda Road shared path
3	Between Bernera Road and Hoxton Park Road	Jedda Road ramp, Joadja Road and Hoxton Park Road, Wilson Road	900	Uses existing shared path infrastructure
4	Between Hoxton Park Road and Cowpasture Road	Yarato Road, Hoxton Park Road, Cowpasture Road	1,100	Uses existing shared path infrastructure
5	Between Cowpasture Road and Elizabeth Drive	Cowpasture Road ramp and Elizabeth Drive ramp for M7 shared path	1,300	Uses existing shared path infrastructure
6	Between Old Wallgrove Road and Wonderland Drive	Old Wallgrove Road, Hannibal Street, Wonderland Drive	1,250	Recommend a new shared path to be constructed on Hannibal Street between Old Wallgrove Road and Wonderland Drive
7	Between Woodstock Avenue and Power Street	Woodstock Avenue, Rooty Hill Road North, and Power Street	400	Uses existing shared path infrastructure, except Rooty Hill Road North where footpath widening is recommended
8	Between Lamb Street and Florence Street	Lamb Street, Rooty Hill Road North, and Florence Street	200	Uses existing shared path infrastructure, except Rooty Hill Road North where footpath widening is recommended
9	Between Florence Street and Simms Road	Florence Street, Rooty Hill Road North, and Simms Road	800	Uses local roads with low traffic volumes, except Rooty Hill Road North where footpath widening is recommended
10	Between Florence Street/Woodley Crescent and Simms Road	Woodley Crescent, Armitage Drive and Simms Road	290	Uses local roads with low traffic volumes

Table 1: 10 known detours with detailed route proposals. (Source: *Appendix D, Traffic and Transport Assessment, page 94)*

Recommendations:

- Align the active transport elements of the M7 Widening project to current Transport for NSW movement and place frameworks and policies. People walking and cycling must not be inconvenienced in favour of driving, either during construction or once the widened motorway is operating. Remember that improved safety, directness and comfort in the cycling network is a net gain for the road network through decongestion.

- Reduce traffic congestion by using the two additional lanes for an integrated public transport service within the central median as recommended by Future Transport Strategies 2056.

- Temporary detours to the existing shared path must be direct and convenient. It is essential to maintain the shared path's viability as an active transport corridor.

- Project planners need to consult with Bicycle NSW and BUGs about how to avoid or at least minimise detours. This will require bicycle-based site tours to ensure a best-practice outcome in line with current thinking around movement and place. Please take advantage of our local knowledge, engineering and planning expertise to develop plans for the detours.

- New shared paths or separated bicycle facilities should be constructed on the relevant local or State roads before a detour begins. It is important that a level of safety equal to the existing shared path is provided. Such new infrastructure would have a long-term benefit, improving and adding linkages into the local area. Funding is warranted by Providing for Walking and Cycling in Transport Projects Policy[xii]

- The project team must construct its own access paths to work sites at minimal inconvenience to *all* road users.

- As highlighted by Bike North, TfNSW must make use of the periods when the shared path is closed to undertake maintenance and fix existing issues. Of particular urgency is the need to resolve the flooding issue at the Prestons end of the M7 shared path. If bike riders are to be prohibited from using the main carriageway, it is essential that the shared path is always accessible and free of flooding. Please ensure this happens while construction teams are on site.

- More facilities are required for pedestrians and cyclists along the M7 shared path. Bike North and CAMWEST that there are currently very few water stations and no toilets. These facilities are essential, along with rest/change areas and e-bike charging stations.

Conclusion

The Westlink M7 shared path is an extensive active transport corridor weaving through 40km of Western Sydney. The proposal to widen the M7 motorway, in response to growing traffic congestion, will sadly not deliver enhancements to integrated public and active transport systems. It is clear that the priorities of toll road operators do not align with the best outcomes for the sustainable development and growth of the Western Parkland City.

It is therefore important, for reasons of public accessibility and fairness and to meet Sydney's future mode share targets, that expansions of the tolled road network are not made at the expense of cycling and walking. It is our expectation that construction work will proceed with minimal interference to active transport.

In the longer term, Bicycle NSW hopes to witness substantial improvements to the cycle network in the area, just as the motorway upgrades will see improvements, albeit short-lived, for driving.

We look forward to close and collaborative consultation with the project team to deliver the best possible results for all stakeholders. In particular, we expect all detours to be developed with input from CAMWEST and Bike North.

[i] Spring Cycle, 2018, July 18. https://springcycle.com.au/top-10-cycle-tracks-in-sydney/
[ii] Galston, Glenorie and Hills Rural Community News, https://galstoncommunity.com.au/new-years-resolution-ride-the-entire-m7-bike-path/
[iii] Westlink M7 Widening Modification Report 2022, Introduction, 1.1, TfNSW, https://majorprojects.planningportal.nsw.gov.au/prweb/PRRestService/mp/01/getContent?AttachRef=SSI-663-MOD-6%2120220801T052957.561%20GMT
[iv] Westlink M7 Widening Modification Report 2022, Need for the modification, 3.1.1, TfNSW, https://majorprojects.planningportal.nsw.gov.au/prweb/PRRestService/mp/01/getContent?AttachRef=SSI-663-MOD-6%2120220801T052957.055%20GMT
[v] NSW Government, Future Transport 2056 [Online 1/4/2020] https://future.transport.nsw.gov.au/plans/future-transport-strategy/future-transport-greater-sydney, Points 3-5
[vi] Mann, A. 2014, Jun 17. Wired. What's Up With That: Building Bigger Roads Actually Makes Traffic Worse https://www.wired.com/2014/06/wuwt-traffic-induced-demand/
[vii] NSW Government, Future Transport 2056 [Online 1/4/2020] https://future.transport.nsw.gov.au/plans/future-transport-strategy/future-transport-greater-sydney, Points 3-5
[viii] Westlink M7 Widening Modification Report 2022, Need for the modification, 3.1.1, TfNSW, https://majorprojects.planningportal.nsw.gov.au/prweb/PRRestService/mp/01/getContent?AttachRef=SSI-663-MOD-6%2120220801T052957.055%20GMT
[ix] Westlink M7 Widening Modification Report 2022, Need for the modification, 3.1.2, TfNSW, https://majorprojects.planningportal.nsw.gov.au/prweb/PRRestService/mp/01/getContent?AttachRef=SSI-663-MOD-6%2120220801T052957.055%20GMT
[x] NSW Government, Providing for Walking and Cycling in Transport Projects Policy CP21001, https://s23705.pcdn.co/wp-content/uploads/2021/02/providing-for-walking-and-cycling-in-transport-projects-policy.pdf
[xi] Stokes, Rob. 2022, Feb 10. Footpaths and cycleways are an act of democracy – ask Steph. Fifth Estate. https://thefifthestate.com.au/urbanism/planning/footpaths-and-cycleways-are-an-act-of-democracy-ask-steph/
[xii] NSW Government, Providing for Walking and Cycling in Transport Projects Policy CP21001, https://s23705.pcdn.co/wp-content/uploads/2021/02/providing-for-walking-and-cycling-in-transport-projects-policy.pdf

CAMWEST
CYCLISTS' ACTION MOVEMENT
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CAMWEST M7 Widening submission

I have prepared this submission on behalf of CAMWEST, a Bicycle NSW affiliated Bicycle User Group with a focus on advocating for and encouraging cycling in the Blacktown, Parramatta, and Cumberland Local Government areas.

In this submission I'm focused on shared path access and continuity during the proposed works in the 9km section of the M7 between Richmond Rd and Old Wallgrove Rd. I also make some proposals that are outside the immediate works corridor but which could enhance existing routes to make them viable detours during the works and as a lasting legacy to the cycling community post completion.

The M7 shared path is one of the central pieces of cycling infrastructure in Western Sydney, used by a wide spectrum of riders – groups of faster riders to slower individual recreational riders and the whole gamut in between. It is used for training rides, recreational rides, and commuting.

Some riders ride the full length, while others use it as a linking 'bridge' between other local paths or networks. While the majority of cyclists ride 'standard' bikes, there are also people that ride recumbent bikes and trikes, tandems, and other cycle variations.

Diversions that work for one group may not suit other groups. The proposals and comments in this submission are made primarily with the recreational cyclist in mind. Those that are happier to mix with a bit of traffic will often find a route that they're happy with – maybe using some of the nominated diversions but mixing that with some on-road riding. For example, while some riders may be happy to ride along Rooty Hill Rd Nth as the most direct detour route around some of these works, others are not.

A few of the M7 path's advantages over other key pieces of cycling infrastructure in Western Sydney are that it is:

- Continuous (Riders don't need to stop for road crossings);
- Wider than a lot of other paths;
- Designed for higher riding speeds;
- Lit for those who ride at dawn/dusk or at night;
- Open and accessible 24 hours a day.

Any diversions will have a tough time meeting all those criteria. However, I don't believe that should be a barrier to attempting to get the best outcome for riders.

The diversions may have the consequence of turning some riders away from the M7 path and onto other paths that were designed with lower rider numbers and speeds in mind. It will be interesting to see whether this does in fact occur.

This submission is broken down into several main sections:

1. Questions regarding works that may require further shared path detours.
2. Possible alternative routes that would take riders outside the works corridor, including proposed path segments that would increase the utility of these routes.
3. Comments on the officially nominated detours.
4. Closing Comments.

Notes:

- The map images in this document are taken from the 'Cycle Map' layer (or rendering) of Open Street Map – see https://www.openstreetmap.org/#map=14/-33.7507/150.8572&layers=C. The thin blue solid lines represent existing paved shared paths. The quality of the paths may vary. The dashed blue lines represent unsealed or unspecified surface paths. The background colour on some of these lines represent whether they are part of local or regional networks.
- All photos were taken in August 2022.

➢ Questions regarding works that may require further shared path detours:

I'm not convinced that we're seeing the complete picture regarding shared path detours in these documents.

- In table 4-10 'Haulage Routes' (*page 44 of 50, of Chapter 4 – Proposed Modification*) one of the entries is 'Westlink M7 shared path, Great Western Hwy'. It doesn't state which side of the highway, but either way there is no listed shared path diversion around this area.
- Another entry in this table is 'Mavis St, Rooty Hill Rd South' for 'Bridge Widening over Rail Bridge'. This has the potential to have some impact on at least the M7 access path to Mavis St. There is a gate at the end of Mavis St into a paddock that could potentially be used to access the bridge which wouldn't impact the shared path – but a reasonable length access road would need to be created.

Can you please confirm if these works will in fact require detours/closure of the main path and/or the respective access paths. If they were to impact the main M7 path then I think Proposal 3 below would need to be given serious consideration.

➢ Shared Path Alternative Routes, including proposed sections:

Before considering the proposed individual segment diversions, I'd like to take a wider overview and examine whether relatively minor additions to the existing shared path network may be able to provide usable diversions away from the proposed works corridor. The map below shows two existing shared path routes either side of the M7 that are potential detour routes around some or all the nominated work areas between Richmond Road and Woodstock Avenue or the Great Western Highway. Suggestions are made below as to how these routes could be enhanced during the works.

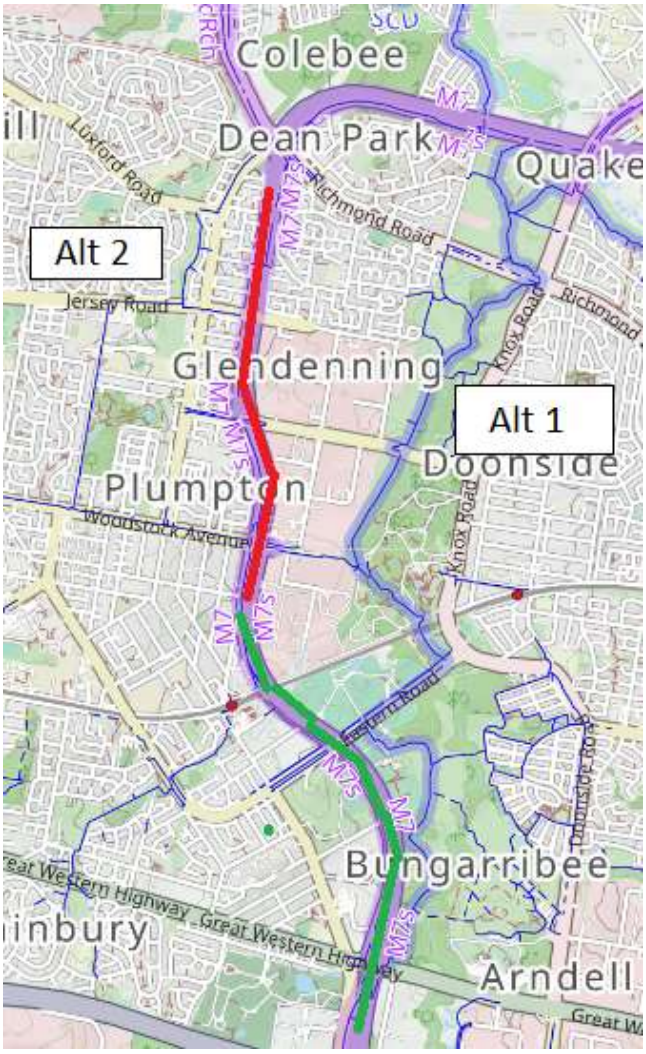
Notes:
- *In the below map the red coloured area of the M7 is the stated diversion area where as the green area doesn't have any specified diversions.*
- *The below descriptions describe the routes North to South.*

Alt 1 : (Thin blue lines with wider blue background) Western Sydney Parkland Track, which can be entered from the M7 path at two points in the Quakers Hill area, and can be exited at Woodstock Ave, Eastern Rd or followed down to the Great Western Hwy. One advantage of this route is that a lot of it is wider than the recommended minimum width of 2.5m. The route is a lot flatter and quieter than the M7 path, but not as suited to higher speed cycling.

There are traffic light crossings of Richmond Rd, Eastern Rd and the Great Western Hwy (if required), with an uncontrolled crossing of Power Street (dual lanes in each direction with a sign-posted speed of 60kmph and a centre refuge island). This is not always the safest of crossings, as a slight curve in the road partially obscures traffic travelling west from Knox Rd. The centre refuge can't accommodate too many people at once.

As is stands this route passes through Nurragingy Reserve (between Woodstock Ave and the railway line). The park has controlled opening hours, and the path through the park can get busy with walkers, strollers and children playing or learning to ride at certain times. Although the open hours for the park are nominally 7am to 5pm in Winter (and extended in outer seasons), the stated times for the Western entrance used to exit to Woodstock Ave shared path is between 9am and 3pm Monday to Friday all year round, with extended openings on weekends and public holidays.

Proposals 1 to 3 below address some of the limitations that the Nurragingy controlled opening hours impose on this route.



Alt 1 and Alt 2 are existing paths either side of the M7 path in this map.

Alt 2: (Thin blue line on map) Richmond Rd to Woodstock Ave shared path via Rooty Hill Rd Nth, Luxford Rd, the Bells Ck reserve corridor, Jersey Rd and Hyatts Rd. This path is longer with traffic light crossings of major roads, plus some uncontrolled crossings of minor roads, driveways and the fairly major Jersey Rd (with a centre refuge). There is a shared path along Woodstock Ave to get back to the M7 path or the Western Sydney Parklands Track.
The Hyatts Rd section of the path runs parallel to Rooty Hill Rd North, but west by around 720m. It goes past Plumpton Marketplace Shopping Centre, Plumpton High School and Plumpton Park.
Proposal 5 below presents a possible alternative to some of this route.

Proposals:

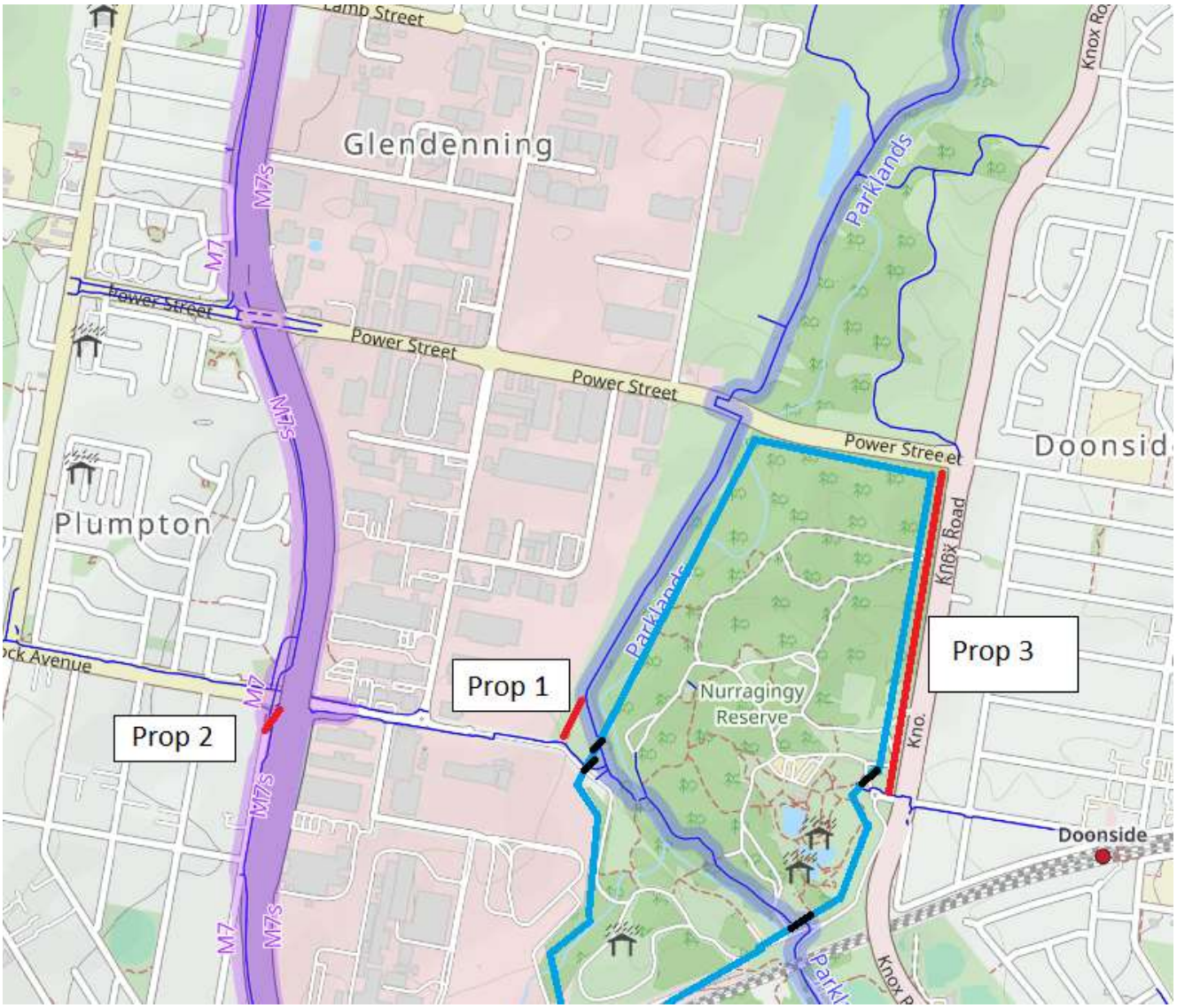
A total of five proposals are outlined here.

Please note that

- On the maps the proposed shared-paths are marked in red.
- No attempt has been made to investigate who owns or is responsible for the land used in these proposals. I suspect Proposal 1 is Western Sydney Parklands, as there is a Parklands sign just inside the gate.
- I acknowledge that the engineering works for some of these proposals may make them impractical.

The first three are related to the above Western Sydney Parklands 'Alternative 1' path. I believe they would increase the amenity of this route by ensuring that it is usable 24-hours a day, even when Nurragingy is closed.

Note that Proposals 1 and 2 utilise the shared path on the southern side of Woodstock Ave under the M7 bridge. This may become unusable for the period Woodstock Ave is closed for M7 bridge widening.



Map showing the location of the first three proposals. Approximate boundaries of Nurragingy are in blue, gates in black, with red lines being the shared-path proposals described below.

Proposal 1:

The access road to the Western entrance of Nurragingy Reserve is virtually an extension of Woodstock Ave. There is a shared path which runs alongside the access road and Woodstock Ave, joining the Western Sydney Parklands track within Nurragingy Reserve to the M7 shared path and further west to Rooty Hill Rd North, Hyatts Rd shared path and the Lethbridge Park to Mt Druitt path. There are shared paths on both sides of Woodstock Ave under the bridge and east of the bridge.

There is a 130-metre-long vehicular access track which joins this shared path just outside the Nurragingy access gates with the Western Sydney Parklands Track. The track has a gate at the Nurragingy access road end. Riders can squeeze through the posts beside the gate (if riding a standard bike). The track is composed of dirt/clay and blue metal, and is ridable on bikes with wider tyres, depending on track condition and rider skill level.

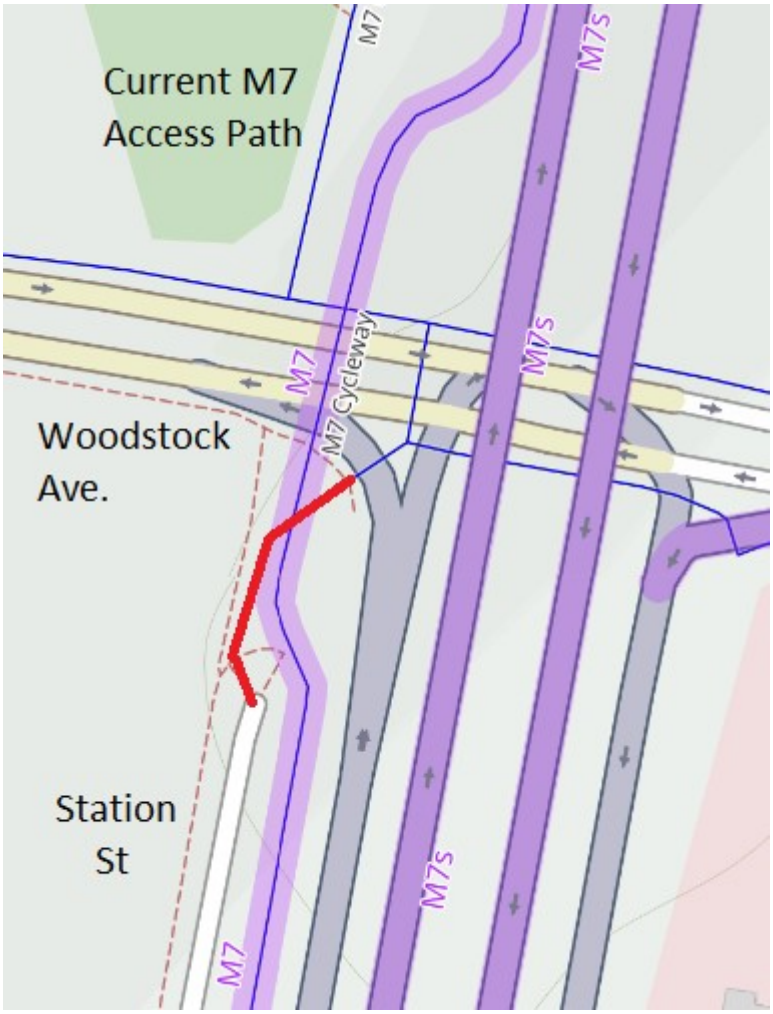
The proposal is that the vehicular access track either be converted to a shared path or bitumen surface with a more cycle-friendly entrance at the gate. If this path was in place riders could have ready access between the shared path on Woodstock Ave and the Parklands Track north of Nurragingy Reserve 24 hours a day, without having to pass through the Nurragingy controlled gates.

Gated entrance to track off existing shared path. The photo was taken from the Nurragingy access road. Note the narrow gap between the posts to squeeze through.

Photo below: Standing part way along the track, looking back towards the gate. There is a section of blue metal near the gate which can be tricky to negotiate.
Photo below and to right: Standing in the same location, but looking towards the existing Parklands Track concrete path.

Proposal 2:

There is a section of dirt/grass approx. 50-60 metres in length between the intersection of the M7 off-ramp at Woodstock Ave and Station St roadway cul-de-sac. This path runs off the southern side of Woodstock Ave, and provides a shorter and quicker route from the Parklands Track to Rooty Hill than crossing Woodstock Ave via the traffic lights to the existing M7 access path, then back over Woodstock Ave on the shared path bridge. Access onto the main M7 shared path can be gained 360m along Station St just after the Wolseley St intersection.



The proposal is that this section of dirt/grass be converted to a concrete shared path. This could be further enhanced if an additional kerb ramp from Station Street roadway on to the M7 path could be built closer to this end of Station St.

View from Station St looking towards Woodstock Ave, with shared path ramp on right. The kerb ramp from Station St on the right used to be a concrete footpath through to Woodstock before the ramp went in. The path was not reinstated after construction of the M7.

Further along the grassed area.

A bit further on, looking underneath the Woodstock Ave shared path bridge to the intersection of the M7 Woodstock Ave off-ramp with bicycle crossing lanterns.

Looking back the opposite direction from the Woodstock Ave/M7 off-ramp intersection crossing island.

Proposal 3:

This proposal is for a concrete shared path of approximately 820m in length along the verge on the western side of Knox Rd between Power St and the main access road into Nurragingy Reserve and Charlie Bali Reserve.

Together with existing paths and an access roadway, a route would be provided around the eastern side of the fenced sections of Nurragingy Reserve. This route could be useful if either Woodstock Ave was closed due to bridge widening, or the shared path between the railway line and the Great Western Hwy was impacted by the works (as previously posed).

On the north side of Power Street there is a bitumen path (part of the Binyang Matta trail) that joins with the main Parklands Track. This track is narrower than the main Parklands track at 2.5m with some tighter turns but should be acceptable for riders prepared to ride at a slower pace.

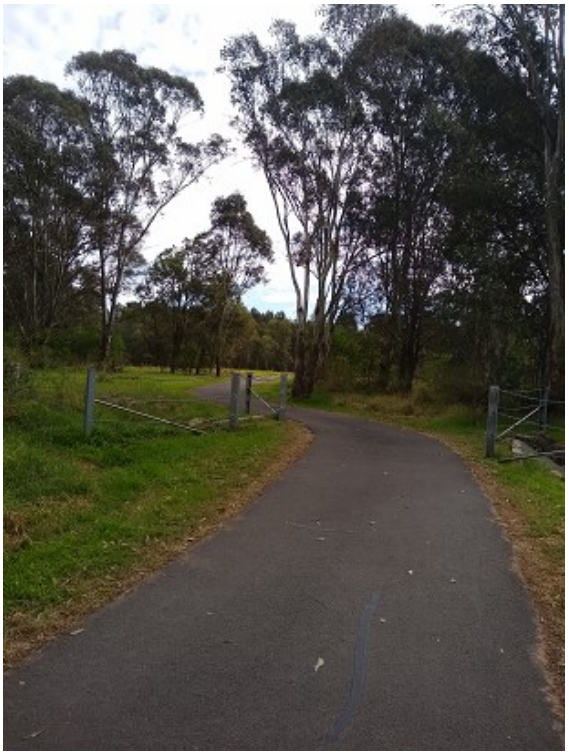
There is signalised crossing of Power Street at the Knox Rd intersection.

There is a reasonably wide verge along most of the western side of Knox Rd. As well as crossing the original Narragingy access road (kerb ramps required), there are three points where the verge narrows:

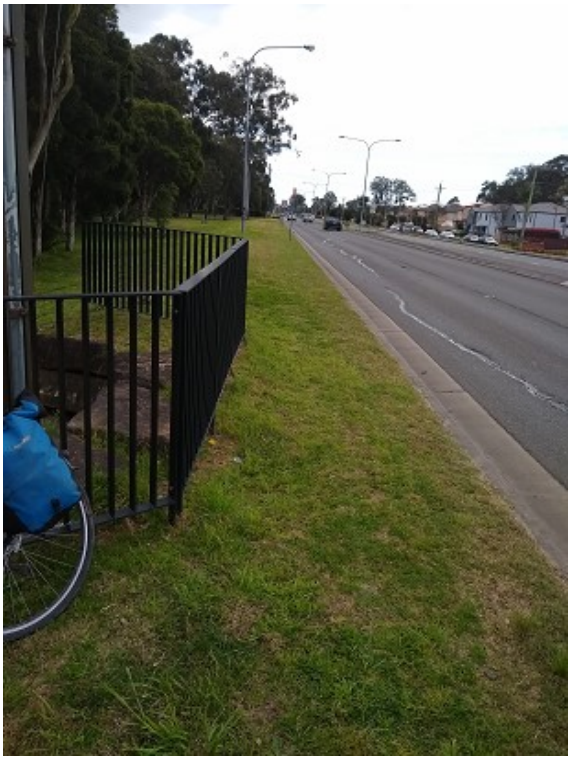
- One, opposite Evoe Pl, is quite a bit wider than 2.5m;
- The second, just north of the old entrance to Nurragingy, is around 2.5m;
- The third, just north of the main Nurragingy access road is narrower.

Engineering solutions or path re-routing would need to be investigated for at least the third narrowing if this route was to be considered.

After reaching the Nurragingy entrance road, cyclists could ride along the access road which skirts around the fenced section of the reserve and re-join the Parklands Track to head under the railway line alongside Charlie Bali Reserve. The Parklands Track could be followed to the Great Western Hwy and crossed at the traffic lights there if needed.



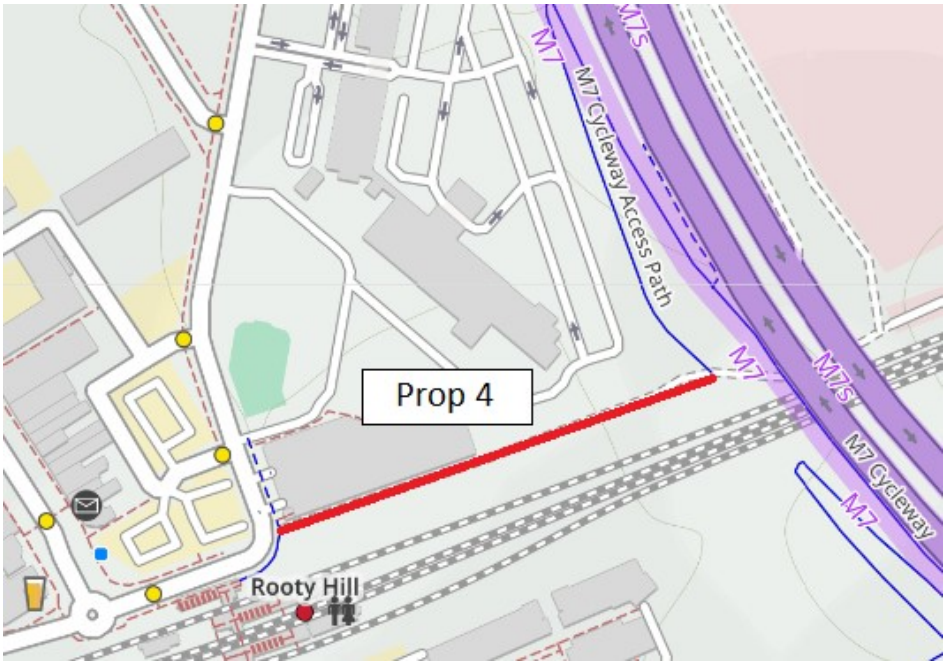
Binyang Matta trail



Narrowest verge section along Knox Rd.

Proposal 4:

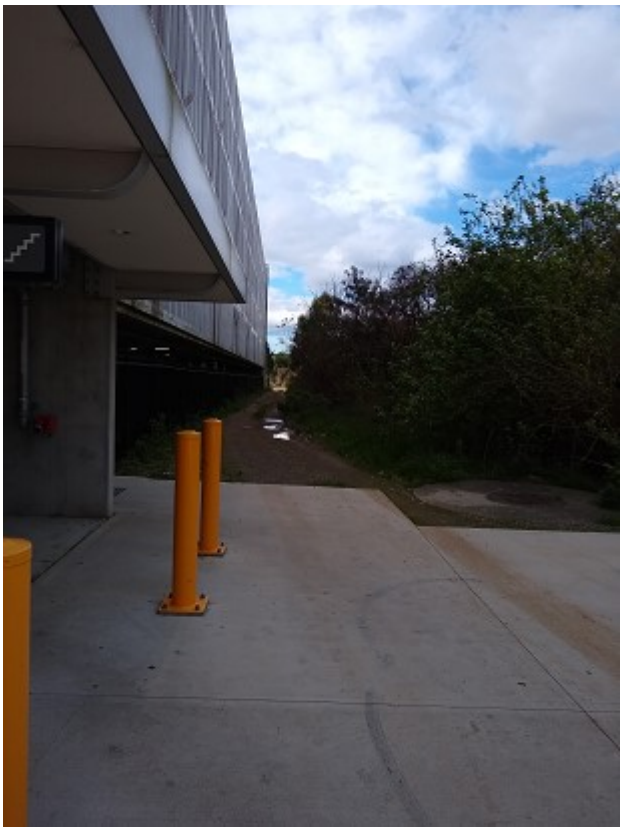
If within scope of the project, this proposal is to replace the existing access track along the northern side of the railway line between Station St Rooty Hill and the bitumen M7 access path with either a bitumen road or shared path. The current access track is around 220m in length. A combination of the recent rains and the construction of the multi-storey commuter carpark has led to a deterioration in the condition of the track.



I was wondering whether this track may be used during the widening of the M7 bridge over the railway line. If so, it may be in the project scope to upgrade it.

I've had two people independently ask me in the last 4 weeks how to go about getting improvements made to this track.

Station St end of track, alongside the Multi-storey commuter car park. Note the puddles along the track. The condition of the track was worse after the prolonged rains.



Further along the track, on the approach to the back of the council depot.

Towards the end of the track, with the sealed M7 access track going off to the left, and the track continuing under the M7 to a locked gate.

Proposal 5:

This path may be an alternative to building some or all the diversions along Rooty Hill Rd North. It is approx. 1.7km long if built in its entirety and uses the Bells Ck reserve corridor.

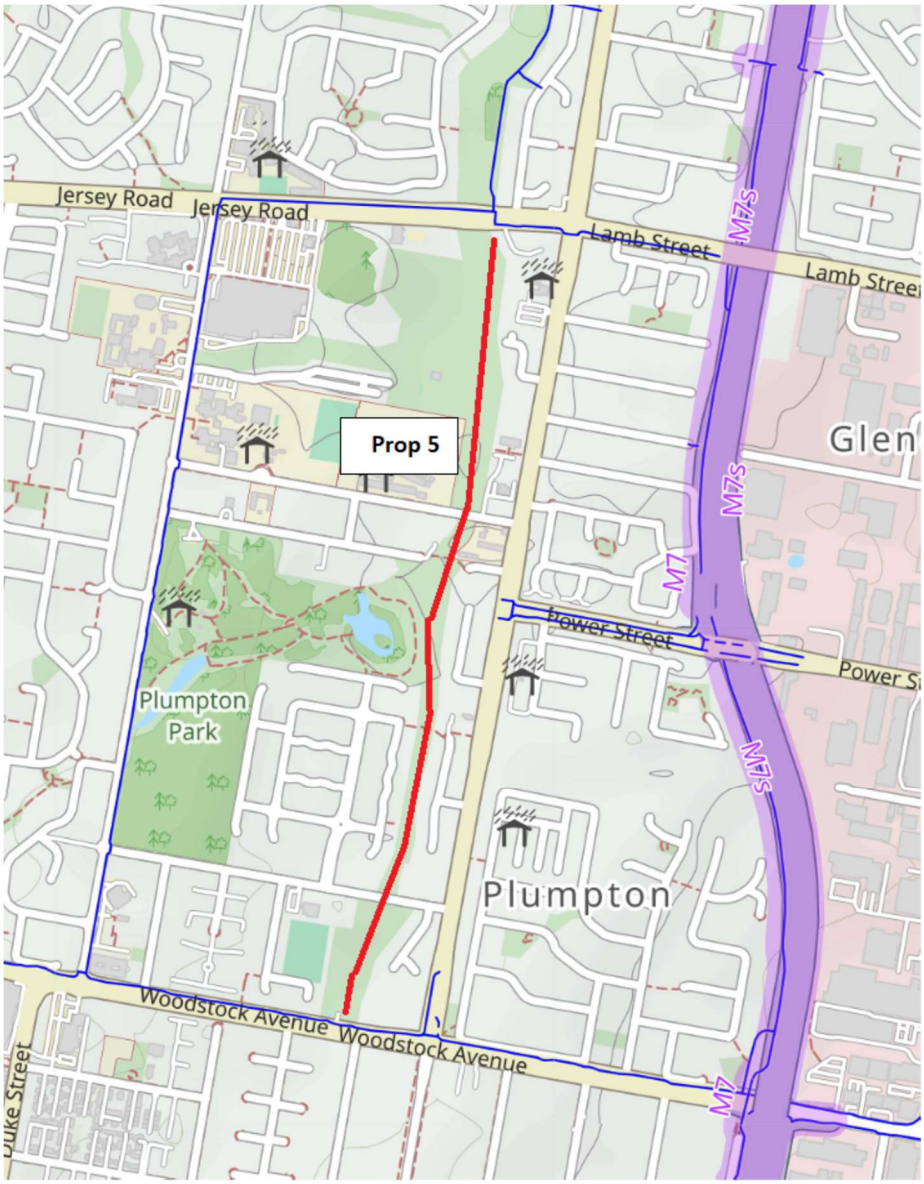
One option to shorten this route may be to widen the footpath along Rooty Hill Rd Nth between Woodstock Ave and Power Street, then divert onto this proposed path from near Power St to Jersey Rd.

There are already shared paths along Lamb St/Jersey Rd and Woodstock Ave at either end of this proposed route.

Those using this route to divert from the M7 shared path would need to cross Rooty Hill Rd Nth twice, which is less than ideal.

If coming from Richmond Rd, the crossing of Jersey Rd is uncontrolled (although there is a centre refuge).

Although appealing to ride during the day, there may be safety concerns for some at night.



➢ Comments on the officially nominated detours

I must confess to having difficulty seeing the point to a number of these individual diversions. I would've thought that maybe a couple of adjoining segments would be done concurrently (which is partly why I made the proposals above).

There are some differences and doubling up of listed diversion points between the Chapter 4 'Impacts on Shared paths' (Page 46 of 50) and table 6-13 (page 101 of Appendix D, 'Traffic and Transport').

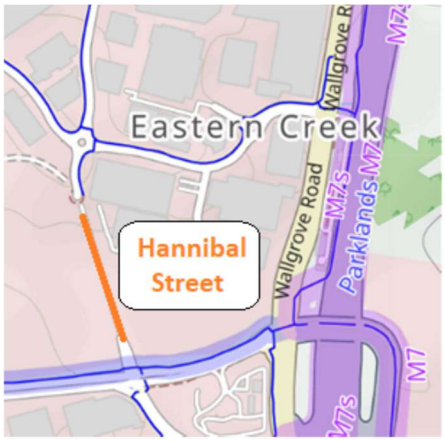
Part of Table 6-13:

6	Between Old Wallgrove Road and Wonderland Drive	Old Wallgrove Road, Hannibal Street, Wonderland Drive	1,250	Recommend a new shared path to be constructed on Hannibal Street between Old Wallgrove Road and Wonderland Drive
7	Between Woodstock Avenue and Power Street	Woodstock Avenue, Rooty Hill Road North, and Power Street	400	Uses existing shared path infrastructure, except Rooty Hill Road North where footpath widening is recommended
8	Between Lamb Street and Florence Street	Lamb Street, Rooty Hill Road North, and Florence Street	200	Uses existing shared path infrastructure, except Rooty Hill Road North where footpath widening is recommended
9	Between Florence Street and Simms Road	Florence Street, Rooty Hill Road North, and Simms Road	800	Uses local roads with low traffic volumes, except Rooty Hill Road North where footpath widening is recommended
10	Between Florence Street/Woodley Crescent and Simms Road	Woodley Crescent, Armitage Drive and Simms Road	290	Uses local roads with low traffic volumes

Points 1-5: (Not copied from the table) Outside the nominated area of this submission.

Point 6: ***Comments:***

I'm assuming there must be a construction compound along this section of path to necessitate the closure. Some users may find this detour feels eerie or desolate. Although practically it may be the only option (unless building a new path alongside Wallgrove Rd), I think it could be a disincentive for some riders to use this section of the M7 path.



Hannibal St was once part of a private access road, but is now a disused no-through road. The Wonderland Dr end is a reasonably new cul-de-sac named Blue Metal Rd. Although only a short road, it has a shared path part of the way down one side, and safety railings all around.

The no-through-road end of Hannibal St starts just beyond the safety railing and is at a slightly lower elevation. There are presently blocks across the road (which you can squeeze through) before traffic lights at the intersection of Old Wallgrove Rd. There are existing shared paths along Wonderland Drive and Old Wallgrove Rd. Any continuation of the Blue Metal Drive shared path would need a gap in the safety railing to be created and then a ramp built down to Hannibal St. Hannibal St may require a re-surface rather than construction of a shared path.

The end of the shared path on Blue Metal Rd, approaching the actual cul-de-sac section.

Looking down from the Blue Metal Rd cul-de-sac onto Hannibal St.

The other end of Hannibal St, with the blocks (and rubbish) across the road before the traffic light intersection with Old Wallgrove Rd.

Point 7: In 'Impacts on Shared Paths' the nearest equivalent is 'Path Entry points off Power Street and Station Street'. By station Street, I'm assuming the reference is to the access ramp near the intersection of Station St and Wolseley St, Rooty Hill – although it could also be the access point just north of the railway line, near the multi-storey commuter car park (See Proposal 4).

Comments:

The current footpath is along the western side of Rooty Hill Rd North between Woodstock Ave and Power St. If widened and used, this would necessitate users crossing Rooty Hill Rd Nth at both Powers St and Woodstock Ave. These are both controlled crossings/intersections, with existing bicycle crossing lanterns. There are a few residential road crossings, a few driveways, a 7-11 Service Station and a Mower repair business along this section.

There is no existing footpath on the eastern side of Rooty Hill Nth along this stretch. While it appears possible to construct a path along part of this section, there's also an undeveloped parcel of land. It may not be feasible to build a path along this section. However, if possible, riders would only need to cross Power St at the bicycle lantern lights. No crossing of Rooty Hill Rd Nth would be needed. There is one dirt access track along this section, but no other roads, driveways, or businesses.

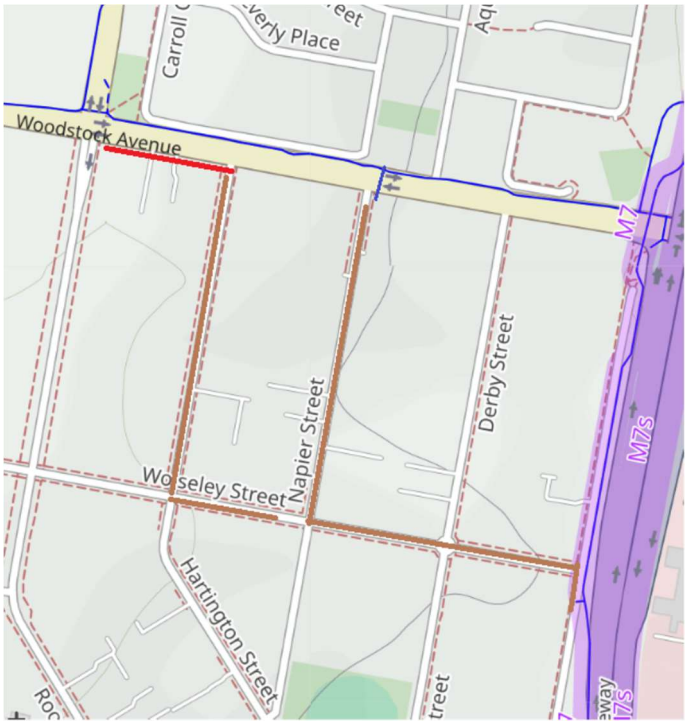
If constructed, Proposal 5 may be an alternative, but would still involve the two crossings of Rooty Hill Rd Nth to reach the M7 path.

If riders did need to get to Station St instead of Woodstock Ave (maybe because of the works associated with the M7 crossing of Woodstock Ave) there are several options available, but each would require on-road riding along residential streets:

- *If not too close to any works at the bridge, riders could cross from the north side of Woodstock to the south using the lights at the corner of the Woodstock Ave M7 exit ramp, then use the path in Proposal 2 to Station St. This is the option with the least traffic.*
- *There is an uncontrolled crossing of Woodstock Ave at Napier St with a small refuge island in the middle. Riders could use Napier St and Wolseley to get to Station St. Note that the southern side of Woodstock at this crossing terminates on a footpath. A few metres of path would need to be widened between the crossing and Napier St. Also note there is a new roundabout at the Napier/Wolseley intersection.*

View from the shared path on the north side of Woodstock Ave looking across Woodstock Ave at the crossing to the start of Napier St.

- *If crossing Woodstock Ave at Rooty Hill Rd Nth lights, I'd suggest widening of the footpath to shared path width along the southern side of Woodstock to Hartington St, then on road along Hartington St to Wolseley and then along Wolseley to Station St. Note there is no roundabout at Wolseley/Hartington.*



Map showing two of the possible routes to Station St described above.

Missing: There is no mention in the above table of the section between Lamb St and Power St, although this is mentioned in the 'Impacts on Shared Paths' section.

Comments:

- *I'm assuming that a shared path along the eastern side of Rooty Hill Rd Nth may be suggested here. There are a number of driveways and residential streets to cross.*
- *There is an existing shared path connection between Lamb St and the Alt 2 path previously mentioned, but this involves crossing Jersey Rd at an uncontrolled crossing with a centre refuge island. The Alt 2 path doesn't connect via shared path to Power St.*
- *Also See Proposal 5.*

Point 8: ***Comments:***

The suggested route is probably the best.

Points 9 & 10: ***Comments:***

These are the same point, but with different suggested diversions. I can understand why the underpass between Florence St and Woodley Cres may be impacted but can't see why the diversion via Armitage (Point 10) was suggested. Assuming that the Simms Rd underpass is open, wouldn't Chilton Ave on the western side of the M7 be the appropriate option?

➢ Closing Comments

Finally,

- I am happy to clarify or elaborate on any of the above suggestions.
- CAMWEST are happy to be a 'sounding board' for proposed shared path detours, particularly within the area covered by this submission, but also possibly for the southern parts of the project area as well.
- Where possible, CAMWEST would like to see phasing of traffic lights altered on detoured sections to give shared path users a shorter wait to cross major intersections, particularly on Saturday and Sunday mornings when a larger number of riding groups typically use the pathway.
- The diversions have the opportunity to highlight the Western Sydney Parklands Track and some of the other great cycling infrastructure in place near the M7.
- CAMWEST request that adequate notification and signage be put in place to notify shared-path users of their options. This includes signage that can be read while riding along, and that is 'robust' enough that it isn't adversely impacted by the weather. Some previous detour notices have not met these criteria.
- CAMWEST would like to be given the opportunity to be involved with the development of the Active Transport Strategy regarding shared path detours and the Construction Contractor's Pedestrian and Cyclist Management Plan (*As mentioned in Appendix D of the project documentation*).
- Is there a formal Community Liaison Group or similar process proposed for the construction phase? Or is this up to the preferred contractor to organise? CAMWEST would like to be given the opportunity for a representative to be involved with any such group. I was personally involved with Community Liaison Group 6 during construction of the M7, representing cyclists and residents in the Rooty Hill area.
- CAMWEST endorses the submissions by Bicycle NSW and Bike North.

Rob Kemp, on behalf of CAMWEST.

Appendix D-3 – Liverpool City Council

LIVERPOOL CITY COUNCIL

Our Ref: 267234.2022-002
Contact: Charles Wiafe
Date: 24 August 2022

Jonathan Kerr
A/Senior Planning Officer
Transport Assessments, Department of Planning and Environment

Dear Jonathan Kerr,

Re: M7 Motorway (Mod 6 Widening) (SSI-663-Mod-6) (Blacktown)

Council appreciates the opportunity to comment on the proposed M7 Motorway Widening between 140m south of Kurrajong Road, Prestons and Richmond Road interchange, Oakhurst/Glendenning, excluding the section at the Light horse Interchange (**the project**).

Council notes that the road widening is proposed to be carried out within the existing central median island to address congestion along sections of the Motorway and accommodate future travel demand expected from additional developments such as the Western Sydney Aerotropolis. Council supports the project subject to the comments in this letter being incorporated into the project.

The Motorway widening is expected to attract additional traffic flow, increase traffic on a number of intersecting roads/interchanges, and road traffic noise on adjoining residential areas. Council notes that concept and detailed designs have not been carried out and requests that at these design stages, appropriate road capacity improvements as outlined in the Attachment, are to be identified to be implemented.

In addition, road noise assessment be carried out to identify locations were additional noise mitigation measures including noise walls are to be installed. The critical sections to be investigated for noise attenuation works including the above mentioned suburbs.

Middleton Grange is west of the Motorway and has an existing at-grade cycleway along the Motorway. Council is proposing to construct a second access road as an extension of Middleton Drive to Aviation Road. Transport for NSW (TfNSW) has requested that for the road extension, the existing at-grade cycleway is to be grade separated.

Council request that the scope of the project be increased to include grade separation of the at-grade cycleway. Council has completed the strategic concept design for the Middleton Drive Extension including for the associated grade separated cycleway and can provide the design to be incorporated into the project design and delivery. Council notes that Middleton Drive is a local road and would enter into an agreement with TfNSW and the Westlink M7 to clarify its liability and responsibility.

Council requests that no additional toll charges above "standard adjustments" or toll periods to justify the construction of additional lanes be levied on the M7 Motorway.

Council provides the attached additional comments on the expected impacts of the project including traffic and transport impacts, environmental impacts including a need for construction environmental management plan. Should you require any further information please contact us again.

Yours sincerely

Charles Wiafe
Manager Transport Management

Comments on the M7 widening

1. Traffic and Transport Impacts

Council notes that traffic and transport impact assessment report on the project has modelled a number of scenarios with and without the project in order to quantify its impact on the surrounding road network.

The project will significantly improve segment performances along the M7 Motorway from an unacceptable LoS (i.e., E or F) to acceptable LoS (i.e., above D) and reduce travel time along the M7 widening sections. However, the project modelling results (Section 7.1.5 of Appendix D - Traffic and Transport Assessment report) show that a number of intersections on the surrounding road network will operate at an unsatisfactory LoS by 2026 and 2036, including:

- Bernera Road/Yarrawa Street/M7 exit ramp/M7 entry ramp;
- Cowpasture Road/M7 exit ramp/M7 entry ramp; and
- Camden Valley Way/M7/M5 northbound entry ramp/M31 exit ramp.

The unsatisfactory LoS of these intersections will have significant impacts on the M7 motorway operation and the surrounding road network. The widening would bring forward the need to consider improvements to these intersections. Hence, TfNSW and the Westlink M7 are required to identify mitigation measures at these locations in consultation with Liverpool City Council.

The project will result in an unacceptable LoS F by 2036 at the Cowpasture Road/M7 exit ramp/M7 entry ramp intersection. Council has developed a project to extend Middleton Grange Drive under the M7 Motorway to connect to Aviation Road. The project has received in principle approvals from TfNSW and Westlink M7. The proposed extension will provide an essential bus link that will service to the Parkbridge estate in the northern part of Middleton Grange as well as reduce travel demands along Cowpasture Road.

It will also provide an alternative access road between Elizabeth Hills and Middleton Grange. This access road is expected to reduce traffic flow along the section of Cowpasture Road between Qantas Blvd and Airfield Drive to/from Middleton Grange and Elizabeth Hills by approximately 10-20% and will improve the M7 ramps/Cowpasture Road intersection operation to an acceptable level. It will provide mitigation measures to impacts of additional traffic at the M7 Motorway and Cowpasture Road interchange caused by this modification.

The M7 Motorway currently has an at-grade cycleway across the section where Council is proposing to extend the Middleton Drive. TfNSW has requested that for the road extension, the existing at-grade cycleway is to be grade separated.

In addition, the project will result in a permanent closure of on-road cycle facility along the M7 between the M5 Motorway and Richard Road and increase cyclist demands along the existing shared path.

Council requests that the project is to improve the existing shared path along the M7 Motorway, such as grade-separated shared path at Middleton Grange and Ash Road to address some flooding and drainage impacts on the existing shared path route along the M7. A pedestrian and cyclist audit is to be carried out along the existing M7 shared path to address any safety and access issues such as lighting and intersection crossings. Hence, the project is to include the proposed Middleton Drive extension and the grade-separated cycleway.

Council has completed the strategic concept design for the Middleton Drive Extension including for

the associated grade separated cycleway and can provide the design to be incorporated into the project design and delivery. Council notes that Middleton Drive is a local road and would enter into an agreement with TfNSW and the Westlink M7 to clarify its liability and responsibility.

Details of the proposed cycling restrictions on the M7 Motorway mainline between the M5 Motorway and Richard Road are to be submitted to the relevant councils and Bike User groups for comments.

Recommendations

a) Detailed design investigations are to be carried out to develop improvement solutions on sections of Bernera Road and Cowpasture Road close to the Motorway as part of the concept/detailed design for the project.

   The Bernera Road upgrade is to include a connection and crossings under the M7 Motorway and intersection upgrades at the intersection of Bernera Road/ Yarrawa Street/the M7 ramps.

   Consultation is required with Council for development of the proposed improvement solutions on Bernera Road and Cowpasture Road.

b) The project scope of work is to be increased to include Council's proposed Middleton Drive extension under the M7 Motorway and associated grade-separated cycleway.

   Council can provide a copy of the Middleton Drive extension design project and other projects along Bernera Road.

c) The project is to provide improvements to the existing cycleway along the M7 Motorway, such as grade-separated cycleway at Middleton Grange and Ash Road to address some flooding and drainage issues. A pedestrian and cyclist audit is to be carried out along the existing M7 Motorway cycleway to address any safety and access issues such as lighting and intersection crossings.

d) Details of the proposed cycling restrictions on the M7 Motorway mainline between the M5 Motorway and Richard Road are to be submitted to the relevant councils and Bike User groups for comments as part of the detailed design.

1.1 Interface projects

Figure 3-4 of the traffic and transport assessment report outlines all road infrastructure upgrade projects interfacing with the proposed modification.

Recommendations

The following projects are to be included in the interface project list.

- Moorebank Avenue upgrade and Cambridge Avenue extension and its connections to the M7 Motorway and Campbelltown Road
- The Middleton Grange Drive extension project
- The Bernera Road/Yarrunga Street/Yato Road intersection upgrade

1.2 Construction traffic impact and management plan

Table 6-8 shows that the estimated traffic volume during Westlink M7 closures is approximately 1,900 vehicles per hour along Kurrajong Road which will exceed its road capacity of 700 vehicles per hour. Alternative detour route is to be identified, particularly heavy vehicles as a result of the proposed M7 closures.

The project will include 50 ancillary facilities located within the Westlink M7 Median, with direct access via the Westlink M7. Each facility will generate up to additional 90 construction vehicle movements per hour and 610 vehicles per day. The construction of the project will result in temporarily closures of the existing Westlink M7 shared path.

The construction of pier and widening structures at bridge widening locations would require temporary lane closures and full road closures on the Hoxton Park Road and Wilson Road, Cowpasture Road and Elizabeth Drive. These roads are major access roads to Liverpool Local Government Area. Detailed traffic impact assessment of temporary road closures on these major arterial roads during construction is to be submitted to Council for comments.

As a result of the above, a detailed construction traffic management plan is to be prepared for construction activities within and outside the M7 Motorway corridor, detailing construction haulage routes, number of trucks, hours of operation, access arrangements, car park provision, pedestrian and cyclist access management plan, and traffic control measures.

Consultation is required with the relevant councils, TfNSW and other stakeholders such as bike user groups for preparation of a detailed site-specific construction traffic management plan and pedestrian and cyclist access management plan during construction.

A community and stakeholder consultation plan is to be developed in consultation with Council for construction of the Project. Notification is required to Liverpool City Council for any major changes to traffic flows along the M7 Motorway such as road and lane closures and traffic diversions.

The project will be constructed between 2023 and 2025, which concurs during the same time periods for construction of other major transport projects, including the M12 Motorway, the Western Sydney International Airport (WSIA), Sydney Metro – WSA and the M5 Motorway traffic improvement works between Hume Highway and Heathcote Road, and the Middleton Grange Drive extension project. Hence, a project construction traffic control group is to be established to coordinate and manage construction traffic activities and disruptions on a wide state road network in Western Sydney.

Recommendations

a) An overarching construction traffic management plan and site-specific construction traffic management plans are to be developed for the project and associated construction ancillary facilities and compounds in consultation with the relevant councils. The plans are to outline construction staging plans, detailed activities and access arrangement for each construction ancillary facility or compound, construction haulage routes, number of trucks, hours of operation, car park provision, pedestrian and cyclist access management plan, traffic control measures and road safety audits for construction traffic management plans.

b) A detailed traffic and transport management plan (TMP) is to be prepared for the proposed road closures on major arterial roads such as Hoxton Park Road, Wilson Road, Cowpasture Road and Elizabeth Drive and included as part of a road occupancy license (ROL) application to TfNSW (Transport Management Centre). A copy of the TMP is to be submitted to Council for comment prior to the ROL being issued by TfNSW.

c) A pedestrian and cyclist management plan is to be prepared in consultation with councils, TfNSW and other stakeholders such as Bike User Groups for any temporary and/or permanent closures of the existing pedestrian and cycling facilities along the M7 Motorway as a result of the Project.

d) A community and stakeholder consultation plan is to be developed in consultation with the relevant councils for construction of the project. It is to outline community consultation and notification procedure, methods, roles, and responsibility and contact details for any major changes such as road and lane closures, traffic diversion and detours to traffic flows along the M7 Motorway and the surrounding road network as well as disruptions to regular bus services.

A construction traffic control group is to be established to coordinate and manage construction traffic activities and disruptions on a wide state road network in Western Sydney.

2. Environmental Impacts

2.1 Noise and Vibration

It is noted the proponent engaged AECOM Australia Pty Ltd to prepare a traffic noise and vibration assessment report. It has identified that if management measures are implemented correctly, it is unlikely the project would result in vibration damage to heritage or other buildings.

With regards to noise, the project could increase in road traffic noise by more than 2 dB(A) along deviated detour routes. Road traffic noise levels were predicted to exceed relevant criteria at a total of 996 residential receivers and that 250 sensitive receivers would be eligible for feasible and reasonable mitigation measures.

Hence, a need for modification of existing acoustic barriers and new noise walls. Mitigation measures to be implemented for potential noise and vibration impacts were detailed in the report.

Council notes the advice that the project is currently at strategic concept design stage, and as part of the concept design, detailed noise assessment would be carried out to identify locations where noise mitigation measures, including noise walls are to be constructed.

Since the construction of the Motorway, additional residential developments have been constructed in the section of Elizabeth Hills, and the developer installed a noise wall except the section between Dobroyd Drive and Aviation Road. Council has been receiving complaints from the existing residents in this catchment area about road traffic noise from the M7 Motorway operation. Council recommends for a noise wall to be constructed along this road section between Dobroyd Drive and Aviation Road.

Similarly, residents of Cecil Hills, close to the intersection of the M7, Elizabeth Drive and M12, have been expressing concerns about expected additional noise. Council recommends that additional noise barrier and/or noise treatments are to be installed along this section of the M7 and Elizabeth Drive, to mitigate cumulative noise impacts as a result of the M12 Motorway and the project.

Recommendations

Council has been receiving complaints from the existing residents in this catchment area about road traffic noise from the M7 Motorway operation. Council recommends for a noise wall to be constructed along this road section.

Concept and detailed designs are to investigate noise level increases and to consider:

- Installation of a noise wall along the Motorway between Dobroyd Drive and Aviation Road.
- Installation of additional noise barrier and/or noise treatments along the section of the M7 Motorway, Cecil Hills close to its intersection with Elizabeth Drive and the M12 Motorway, to mitigate cumulative noise impacts of the proposed modification.
- Consideration should also be given to the following site-specific noise controls that may be implemented to minimise noise levels below the relevant Noise Management Levels:
    - minimising the need for vehicle reversing by arranging for one-way site traffic routes
    - using broadband audible reverse alarms, as opposed to beepers, on relevant plant and equipment to be used on-site
    - where practicable, minimise the number of high noise generating plant items operating concurrently
- Require the preparation of a Construction Noise and Vibration Management Plan and complaints' handling procedure prepared under the supervision of a suitably qualified acoustic consultant.
- The Construction Noise and Vibration Management Plan must identify and implement strategies to minimise noise from the proposed construction activities and incorporate approaches for promoting noise awareness by contractors; training procedures; a complaint lodgement procedure to ensure that members of the public and local residents are able to report noise issues; an ongoing review process and a plan for responding to noise complaints.

  The Construction Noise and Vibration Management Plan shall clearly specify the responsibilities of site personnel in managing noise and include a detailed list of steps taken to manage potential noise impacts. The Construction Noise and Vibration Management Plan and complaints' handling procedure shall be submitted to the consent authority for review.

  Significant advancements have been made to audible reversing alarms. As a result, there is a range of alternatives to the traditional reversing signals capable of providing a safe system of work, whilst also reducing noise impacts. Apart from broadband alarms, these include variable-level audible alarms, focused tonal alarms, non-audible warning systems, proximity alarms, spotters or observers and exclusion alarms. To ensure compliance with work, health and safety requirements, further advice should be sought from SafeWork NSW.

  In accordance with the NSW EPA's Road Noise Policy (2011), mitigation strategies should be considered in a hierarchical approach by first controlling noise at the source. Once the controls at the source are exhausted, the transmission of noise is to be controlled. Once source and transmission controls are exhausted, mitigation measures at noise sensitive

receivers are to be considered. Therefore, the Department must ensure that source and transmission controls are exhausted prior to further consideration of reasonable and feasible at-property treatments for any affected receivers.

It is also recommended that the Department requires acoustic reports and noise and vibration management plans to be prepared or reviewed and certified by a suitably qualified acoustic consultant who is a member of the Australian Acoustical Society or employed by an Association of Australasian Acoustical Consultants (AAAC) member firm.

2.2 Soils and Contamination

The concept and detailed designs is to include an assessment to address possible soil contamination. If required, the Remedial Action Plan shall be referred to the consent authority for review.

Recommendation

The concept and detailed design is to include an assessment to address possible soil contamination. If required, the Remedial Action Plan shall be referred to the consent authority for review.

A Site Audit Statement and Site Audit Report prepared by a NSW EPA Accredited Site Auditor shall be submitted to the consent authority for review and approval confirming that:

- The nature and extent of contamination has been appropriately determined at the proposed development site
- The investigation, remediation or management plan is appropriate for the intended purpose
- The site can be made suitable for the proposed land use in accordance with the submitted Remediation Action Plan (if required).

2.3 Air Quality

Council notes that AECOM has advised that air quality impacts associated with the proposed development's operation were 'minor' and changes to the Project design were not recommended. The consultant confirmed that construction and operational air quality impacts are unlikely to have a significant impact on ground level concentrations.

Recommendation

An Air Quality Management Plan including, a description of the measures to be implemented to ensure compliance with the conditions of consent, an air quality monitoring program for the construction and operational phases, best practice management; and mitigation of air quality impacts during worst case meteorological conditions, is to be prepared and submitted to the Department.

In addition, a comprehensive monitoring is to be carried out during the construction and operational phases of the project to encourage environmental best practice and facilitate adherence with the Approval and Environment Protection Licence (if applicable).

2.4 Water Quality Impacts

The proposed development has the potential to increase stormwater flows due to the increased surface area of impervious materials. Construction activities may also result in erosion and sedimentation issues. A Construction Environmental Management Plan will be required for the proposed development to mitigate potential impacts upon receiving waters.

Recommendation

To mitigate potential risks to human health and the environment, it is requested that the Department takes the following matters into consideration.

2.5 Other Concerns and Recommendations

Appropriate Regulatory Authority

'Road construction' is identified in Schedule 1 of the Protection of the Environment Operations Act 1997 as a scheduled activity requiring an Environment Protection Licence. It is likely that the proposed works would be classified as a scheduled activity and require an Environment Protection Licence under the Protection of the Environment Operations Act 1997.

Construction Environmental Management Plan

A detailed Construction Environmental Management Plan (CEMP) must be prepared for the project. The CEMP must address all environmental aspects of the development's construction phases, and include, where relevant, but not be limited to, the following:

a) Asbestos Management Plan
b) Project Contact Information
c) Site Security Details
d) Timing and Sequencing Information
e) Site Soil and Water Management Plan
f) Noise and Vibration Control Plan
g) Dust Control Plan
h) Health and Safety Plan
i) Waste Management Plan
j) Incident Management Contingency
k) Unexpected Finds Protocol

3. Urban Design and Landscaping

It is noted that the project would affect a number of viewpoints along the Motorway. The viewpoints within the Liverpool LGA, that have a High or High to Moderate adverse impacts rating by the project need to be mitigated through the incorporation of public art. This needs to be done in consultation with Council's Public Arts Officer.

Recommendation

The Public art is to incorporate into the viewpoints as listed in table 7-82 Visual Impact Assessment Summary with overall ratings of High or High to Moderate. Mitigation measures should then be provided on within Table 7-83 Mitigation Measures in consultation with Council's Public Arts Officer.

4. Stormwater and water quality

Construction activities may result in erosion and sedimentation issues. A Construction Environmental Management Plan is to be prepared to mitigate potential impacts upon receiving waters.

The project is to include mitigation measures that would minimise impact of flooding and water quality during/prior to construction.

Council notes that the existing stormwater management infrastructures including detention basins and water quality treatment trains had been designed to accommodate a future widening of the road and pavement into the median.

Recommendations

A CEMP is to be prepared to identify strategies to mitigate potential impacts upon receiving waters.

5. Tolls

Council notes that tolls would continue to be charged through the construction phase and that motorists would continue to pay based on distance travelled capped at 20km. Council also notes that the tolls are adjusted based on the consumer price index each quarter.

The project report indicates various options are being investigated to fund the project. Council notes that travel demand on the Motorway would increase with the planned M12 Motorway and Western Sydney Airport development.

At its meeting on 31 August 2022, Council discussed the Motorway widening and resolved that: this submission includes a request for no additional toll charges above "standard adjustments" or toll periods to justify the construction of additional lanes be levied on the M7.

Council also knows that the M12 Motorway is being delivered as a fully toll free road by the state government and that Liverpool Council supports this arrangement.

Recommendation

Council requests that no additional toll charges above "standard adjustments" or toll periods to justify the construction of additional lanes be levied on the M7 Motorway.

Appendix D-4 – Fairfield City Council

31 August 2022 Your Ref: SSI 663 MOD 6

Jonathan Kerr
A/Senior Planning Officer
Transport Assessments
Department of Planning and Environment

FAIRFIELD COUNCIL SUBMISSION - M7 MOTORWAY (SSI663) – PROJECT MODIFICATION 6

The submission sets out Fairfield Councils issues and recommendations relating to public exhibition of the Environmental Impact Statement (EIS) for the M7 road-widening proposal. On 23 August 2022, the EIS as publicly exhibited and subsequently reported to a full Council meeting. The Council unanimously resolved to endorse the following recommendations:

1. *Council endorse the issues and concerns highlighted in the report as the basis for making a submission to the NSW Department of Planning and Environment (DPE) regarding the West link M7 Motorway road widening project comprising additional lanes in each direction along the motorway.*

2. *Council advice Transport for NSW, given the removal of land previously identified for a major public transport route within the M7 Motorway corridor, as a matter of urgency, the business case for the Parramatta to western Sydney Airport Passenger Rail Project should be brought forward.*

3. *A copy of Council's submission be forwarded to relevant State and Federal Members of Parliament requesting support for the concerns raised by Council in relation to the proposal.*

The major concern raised of Council proposal does not adequately consider previous commitments made by TfNSW to reserve the existing M7 center median for a rapid bus transit corridor. This commitment is in line with the EIS approved in 2002 and with the original conditions of the consent. Given the potential of the proposal to restrict options for a rapid transit corridor within the M7 corridor, Council believes that further planning for the Parramatta to Western Sydney Airport passenger rail must be bought forward to ensure delivery of a higher order public transport connection from various centres in Western Sydney to the Western Sydney airport.

Other concerns detailed in this submission include, acoustic impacts on future sensitive residential receivers in Horsley Park and Cecil Park, impacts on Council's local road network as a result of construction and operation of the proposal, impacts to critical state road intersections, lack of public awareness of the project.

KEY ISSUES AND CONCERNS

1. JUSTIFICATION FOR THE PROPOSAL AND LOSS OF RAPID TRANSIT CORRIDOR

The modification application suggests that the widening proposal *"would not preclude the use of the median or lanes of the motorway for dedicated public transport"* Council considers that insufficient analyses and information has been provided to clearly demonstrate this outcome can be achieved, particularly in light of the design parameters that were applied to construction of the M7 corridor for provision of a future rapid transit corridor and following conditions applying to its ongoing operation:

> ***"Condition 36** – The proponent shall, in consultation with the DoT, design the Project to accommodate the future provision of public transport facilities. Consideration shall include but not be limited to, the requirements for bus and light rail stops/stations, bridge crossings, vertical and horizontal clearances and alignments, and pedestrians and bicycle access such that retrofitting for dedicated public transport use is not precluded in the future".*
>
> "***Condition 42** – Five (5) years after the opening of the project to traffic and every ten (10) years subsequently up to 25 years, the proponent shall review the potential demand for dedicated public transport services on the project to the satisfaction of the Department of Transport and shall implement any such measures as agreed between the proponent and the Department of Transport*".

In addition, it is noted that following commitments were included in the EIS document approved in 2002 that relate to a future rapid transit corridor down the reserved center median

> "*Provision has been made between the two carriageways of the orbital proposal for a similar transit facility either bus, heavy or light rail. Airport express bus services may take advantage of the Western Sydney Orbital route to provide high quality services to and from the airport, each of these regional centres (Blacktown, Liverpool and Parramatta) serves as a major interchange point on the public transport network and provide a logical focus point for potential airport express bus services*".

As a result of the above, when the EIS was subsequently approved, local councils and community of Western Sydney understood this to be an important commitment to public transport options within the region. It is noted that TfNSW has recently identified the need for rapid bus connections to the Western Sydney Airport (WSA) and this is not addressed in the modification application. As highlighted further in this submission, the loss or undermining of rapid transit options within the M7 heightens the need for bringing forward planning for the East West Passenger Rail from Parramatta to the Western Sydney Airport.

The EIS does not consider the benefits of mode change such as provision of public transport, including how this may reduce congestion on the M7 and reduce reliance on private vehicles. Given the above, further consideration of the proposed modification should include a cost benefit analysis (or similar) to determine whether there is sufficient justification for additional lanes at the expense of losing a range of public transport options within the M7 corridor.

Recommendation 1 - The proponent to provide further analysis and demonstrate clearer justification for the road widening proposal, including the costs and benefit of additional vehicle lanes against the potential for future rapid transit options within the medium strip.

Recommendation 2 - Evidence of the 5 and 10 year public transport demand reviews to be provided to Council.

2. EAST WEST PASSENGER RAIL LINK

The state governments Future Transport 2056, Fairfield Local Strategic Planning Statement (LSPS) and UIA draft Structure Plan all acknowledge the potential of an East-West passenger rail line from Parramatta to the Western Sydney Airport that includes the potential for rail stations at Prariewood Town Centre and Cecil Park (UIA).

Although TfNSW has undertaken preliminary investigations for the route of the rail line, at this stage there is not a commitment by the current State Government to the project with the preparation of a business case and timing for delivery of the passenger rail line remaining outstanding.

The loss of a potential rapid transit corridor (above) within the M7 heightens the need for the state government to bring forward further investigations and preparation of the business case for the east-west passenger rail. Failing this, major uncertainty will remain around public transport infrastructure that is required to service the new airport, existing centers and future urban release areas in Western Sydney that reduces dependence on private vehicle use.

Recommendation 3 - Given the removal of land previously identified for a major public transport route within the M7 Motorway corridor, as a matter of urgency, the business case for the Parramatta to Western Sydney Airport Passenger Rail Project should be brought forward.

3. FAIRFIELD URBAN INVESTIGATION AREA (UIA)

Following the designation of the Fairfield rural lands as an Urban Investigation Area under the Greater Sydney Region Plan and the Western City District Plan in 2018. A UIA steering committee was developed (comprising representatives from the Greater Sydney Commission and State agencies), Council developed a number of options for future development of the UIA comprising Horsley Park and Cecil Park. After consideration of submissions from the community in April 2019, Council resolved to endorse the draft Structure Plan included in Councils report (**Attachment A**)

Since this time, feedback from the Greater Sydney Commission (now Greater Cities Commission (GCC)) and other State agencies has highlighted the need for further detailed investigations into a range of infrastructure, environmental and transport planning issues.

The analysis of future planned uses undertaken for the M7 road widening proposal does not acknowledge the Fairfield UIA. Council considers that omission of the UIA from the strategic analysis for the proposal a major concern. Specifically, traffic modelling/management issues as well as acoustic impacts on the UIA have not been considered and need to be factored into further assessment of the project.

It is noted that the proposal includes the upgrade of the existing sound walls along the M7 at various locations to mitigate the impact of noise to sensitive residential receivers. However, this does not include any locations in Horsley Park and Cecil Park. Council consider that the issue of mitigating potential acoustic impacts of the proposal on the UIA needs to be addressed under the current widening proposal.

Recommendation 4 - The EIS must be revised to include closer analysis of the UIA's relationship with the proposal, including review of the Traffic Impact Assessment (TIA) and Noise and vibration impact assessment. This analysis must consider the potential of the proposal to exacerbate the negative impacts on residential amenity levels in Horsley Park and Cecil Park. This should include traffic impacts at the 5 key intersections negatively impacted within the project scope. Suitability of existing mitigation measures such as provision of sound walls must also be considered, having regard to the potential for medium/high density residential development in the Horsley Park and Cecil Park UIA in the future.

4. RELATIONSHIP WITH OTHER PROJECTS

Council considers the project EIS does not demonstrate clear alignment with the strategic transport planning framework for Western Sydney including, Future Transport 2056, Greater Sydney Service and Infrastructure Plan, NSW Freights and Port Plan and the Road Safety Plan 2021.

The EIS does not demonstrate the implications of the M7 widening on the following projects in the region:

- **Western Sydney Intermodal Terminal at Mamre Road** – A 24/7 container loading and unloading facility which will be used to distribute freight cargo from the proposed Western Sydney freight line as well as state arterial roads and M7;
- **Southern Link Road** – A proposed 4 lane arterial road from Mamre Road to Old Wallgrove Road to create a link between Mamre Road intermodal to the Westlink M7;
- **Horsley Drive Upgrade** – A planned and committed upgrade of the Horsley Drive from Cowpasture Road North intersection to the Westlink M7 Intersection of the Horsley Drive;
- **Upgrade of Wallgrove Road** – Medium term unfunded commitment to upgrade Wallgrove Road from Elizabeth Drive to the Horsley Drive. The road runs parallel to the M7 and important feeder road for the motorway;
- **Elizabeth Drive East of the M7** – A proposal to widen Elizabeth Drive in both directions to facilitate additional traffic predicted to be generated by the western Sydney Aerotropolis and the Western Sydney airport, as well as the M7; and
- **Western Sydney Freight Line –** A proposed freight line connecting Port Botany with the Mamre Road Intermodal Terminal. The corridor west of the M7 has been confirmed.

Recommendation 5 – TfNSW must review the current strategic framework and impact of the M7 widening project to clearly identify the implications for existing road infrastructure, traffic modelling, feasibility, capacity and impact on the timing for projects identified above.

5. OPERATIONAL TRAFFIC IMPACTS

The Traffic Impact Assessment (TIA) states that the proposal will result in the following intersections in the Fairfield Council area experiencing a fall in the level of service to 2036 including increased back of queue length, resulting in the need for upgrades:

- Old Wallgrove Road/Wallgrove Road/M7 entry ramp/M7 exit ramp;
- Cowpasture Road/M7 exit ramp/M7 entry ramp and;
- The Horsley Drive/Wallgrove Road/M7 entry ramp/M7 exit ramp

TfNSW acknowledges that the proposal will result in the following intersections performing at an unacceptable Level of Service (LOS). The EIS does not make any commitments regarding upgrade of the intersections affected.

Recommendation 6 – TfNSW must commit to the required upgrades prior to the new M7 lanes opening. Alternatively, the M7 operator must undertake the work as part of the overall project proposal to minimize impacts on road users and Councils local road network, noting that, when the M7 was constructed and integrated with the existing road network, the capacity of a number of intersections needed to be improved. In addition, the report must consider Wetherill Park and Smithfield industrial areas adjacent to the M7 it is ignored in the modification report and is the largest key industrial estate within proximity to the project. It is also a key destination node for freight movements. Improving accessibility for freight movements from Wetherill Park onto/off the M7 and link onto Wallgrove Road (non-toll option) to access Erskine Park should be considered noting the southern link road connection.

6. CONSTRUCTION TRAFFIC IMPACTS

Construction for the new lanes will take approximately 2 years and is proposed between early 2023 finishing in late 2025. During this period, local and regional roads will be utilised to facilitate construction activity. In the Fairfield LGA, the following local and state roads have been identified as routes for construction vehicles:

- Redmayne Road
- Elizabeth Drive
- Cowpasture Road and

- Horsley Drive

TfNSW indicates that approximately 50 vehicles per hour will travel on local roads utilized for construction vehicle routes. Analysis undertaken by TfNSW indicates that peak hour traffic will increase by 18% on Cowpasture Road and 7% on Elizabeth Drive because of construction traffic, the average in other council areas impacted being 6%.

Council does not support the proposed extent of use of the local road network for construction vehicle routes, due to the disproportionate impact on local infrastructure and road users within the Fairfield City Council area.

Recommendation 7 – TfNSW consult with Councils traffic branch prior to and during the preparation of the construction traffic management plan to ensure that the impact on council's local roads are minimized for the construction period. TfNSW clarify the segment of Redmayne Road proposed to be used for construction vehicle routing.

7. IMPACT TO SHARED CYCLEWAY PATH

The EIS states that the shared path will temporarily close at multiple locations to facilitate construction, resulting in detours for users approximately 600m to 1.3km in length. Council do not support the use of Wallgrove Road as a diversionary route for cyclists as it is not considered safe based on the expected increase in heavy vehicle use of the roadway during construction.

The construction will permanently close the on road cycleway between the M5 interchange located in Liverpool Council and the Richmond Road located in Blacktown Council. Cyclists currently using the on road cycle way will be diverted to use the existing shared path that is separated from traffic. It is unclear what impact this will have on the users of the existing shared path network.

Recommendation 8 - Council requests the applicant provide further information as to the locations and period of closures along the shared pathway. Council's open space team will need to be involved in the establishment of any diversionary routes to ensure minimal impact to users. In addition, it is requested that TfNSW provide cycling counts for the on road cycling way to determine the number of diverted cyclists to the shared pathway.

Assessment of cycleway alternate routes needs to consider the road environment prior to being considered acceptable – Wallgrove road is not a safer alternative due to the road shoulder/speed environment arrangements, particularly crossing the road for northbound movements. This is a very limited assessment and needs much more detail prior to being considered acceptable (or able to be assessed). As increased truck traffic is expected on Wallgrove road, this reduces the safety of cyclists significantly.

8. NOISE AND VIBRATION

The Noise and Vibration Impact assessment (NVIA) indicates that residences and other sensitive receivers including schools and places of public worship are impacted by the proposal. The NVIA also indicates multiple sensitive receivers that are eligible for reasonable and feasible mitigation measures because of the proposal. It is unclear from the report if these locations are already exceeding the critical noise limits due to existing noise generated by the M7 or if they exceed them due to proposal. At this stage, no details have been provided regarding the location and number of residential properties affected in the Fairfield LGA. In recent meetings with WSO, Council requested the applicant provide this information to assist Council officers in their assessment of the EIS. This request was declined.

Recommendation 9 – Council requests TfNSW provide property details of sensitive residential receivers' eligible for feasible and reasonable noise mitigation measures because of the proposal, as demonstrated in the relevant NVIA appendices. The applicant is to also clarify if the noise levels exceed critical limits due to the proposal. The NVIA and associated modelling must be independently peer reviewed to ensure the reports are validated.

Further to this, analysis must be undertaken to determine that those properties effected including those where development consent may have been recently granted and construction commenced for sensitive uses such as places of public worship and educational buildings located in the project scope.

Construction activity and night time sleep disturbance must be kept to a minimum with standard hours for construction activities being acceptable.

9. ECONOMIC IMPACTS & COMMUNITY CONSULTATION

The M7 is a main corridor for trucks and traffic coming out of the Smithfield Wetherill Park Estate and construction works will have significant impacts on traffic movements through the area that already has issues. In this respect, the proposed construction works will have significant implications for the operations of businesses in the Estate.

Council requests further information on the level of consultation undertaken to date and which stakeholders/sections of the community were consulted. The idea of random consultation would likely miss some of the key businesses and residents that will be affected by the works. It is noted that in recent meetings with the applicants it was stated Council had not been contacted to obtain the rateable addresses for those properties identified as impacted in the NVIA.

Recommendation 10 – Impact on business operations, truck movements and staging of the works needs serious consideration given the impact the project will have on traffic merging into the M7. A strong marketing plan needs to be implemented to ensure all businesses in the Wetherill Park Industrial estate are provided with ongoing updates and significant notice of commencement of works and areas of maximum impact so that businesses can plan alternate routes where possible.

Recommendation 11 – Details of property owners to be confirmed with Council in relation to properties identified in the NVIA as requiring reasonable and feasible mitigation measures due to the proposal. This will ensure that these properties are appropriately notified. It is also recommended a contact service be established by TfNSW and Transurban during construction and operation of the proposal to assist affected members of the community, interpreting services must be provided including Auslan for those who are hearing impaired.

10. CATCHMENT PLANNING

The Surface Water and Flooding Impact Assessment by Lyall and Associates dated July 2022 has been reviewed. The flood modelling is deemed suitable and all 1% Annual Exceedance Probability floodplains crossing the M7 have ben modelled. The report has concluded that existing basins can accommodate the upgrades within the existing freeboard.

Recommendation 12 – All basins should retain a minimum of 0.3m freeboard for the 1% AEP and modifications should be made to the basins that do not meet this requirement due to modification. TfNSW have reviewed risk associated with the project, but have not addressed the role the roads plays as a major evacuation route during natural disasters. Recent works undertaken as part of the Georges River Regional Flood Evacuation Study (DPE & Liverpool Council) highlights how important the road is to ensuring people are able to evacuate during regional floods, and this needs to be addressed as part of the modification to ensure the capacity required can be achieved.

11. TOLL REVENUE-

The project will increase the toll revenue of the M7 authority and the toll collection period by 5 years. Despite this the proposal has not demonstrated how the increased revenue will be used to the future benefit of the broader community of Western Sydney including the Fairfield Council area.

Recommendation 13 – The toll collection authority must demonstrate how increased toll revenue will be used to upgrade regional active transport links effected by the proposal, contribute to the upgrade of Council infrastructure degraded by the construction period of the project, including Redmayne Road and contribute to upgrades at key intersections impacted by the proposal.

12. ELIZABETH DRIVE EAST OF THE M7 INTERCHANGE AND WALLGROVE ROAD

Council has long advocated for an upgrade to Elizabeth Drive east of the M7 interchange to facilitate east/west connection to the future WSA airport. The modelling undertaken is severely limited in this regard. This is important as the rapid bus routes are expected to use Elizabeth Drive and the capacity of Elizabeth Drive through the M7 interchange is then an important determinant for this service (not just access to/from the M7 as is implied by the modelling approach). Lanes in Elizabeth Drive are currently limited to the width between the existing bridge abutments and further widening must be determined now.

Wallgrove Road will be utilised as a toll free freight route as a result of the future SLR connection and connection to the M4 and Mamre Road Precinct. As there is no additional lane across the M4, the number 1 lane (or left lane) will become an exit only lane into the relevant off ramp and allow the on ramp to join the M7 without a merge at the M4, to ensure benefits are maintained an upgrade at the old Wallgrove road is required.

Recommendation 14 – The traffic modelling must be revised to include assessment of the impact of the increased capacity on Elizabeth drive east of the M7 and resulting upgrades requirements, due to the modification.

The capacity of the interchange at Old Wallgrove Road needs upgrading or the removal of the merge/diverge at the M4 benefits will be dissipated very quickly.

13. CONSTRUCTION TRAFFIC ROUTE AND VEHICLE DAMAGE

TfNSW is required to obtain an approval route for haulage of construction materials, if selected routes include Council's owned roads. In addition to the accidental or unexpected damage to Council's assets, TfNSW has to come to an agreement to pay the cost to Council prior to commencement of works, as functional life of road pavement will be consumed by the number of trips made for material haulage to the project.

Recommendation 15 – A dilapidation survey is to be carried out for all Council roads that will be used as construction routes prior to construction in accordance with Section 69 of the NSW Government condition of consent. In order to work on Council road reserve, applicant will need to apply for a driveway applications and road works permit if required. The dilapidation survey should include information in regard to each defect on the road surface, and other associated assets and is to be prepared by a suitably qualified person. This process will establish the extent of any existing damage and enable any deterioration during and after construction to be observed. Council's assets management team is to be contacted to provide the damage calculation methodology due to construction vehicles.

14. ASSET HANDOVER

It is unclear that any assets will be handed out to Council or not. Council note that the modification report states solutions should be investigated to cater for forecast traffic volumes associated with population and employment growth and to some degree the proposed, modification, at the following locations within FCC.

Recommendation 16 - If any assets are required to be handed over to Council the proponent must:

- Prepare and provide list of assets which are proposed to be handed over to Council;
- Provide prepare list of Council assets are proposed to be demolished or impacted by the proposed design;
- Life cycle cost analysis to be performed for the life of assets and provided to Council. Whole of life cycle cost (capital and maintenance costs) to be provided to Council for the operation of the proposed new assets. Council is happy to provide the useful life of the proposed new assets for life cycle analysis;
- How the life cycle cost funded? How Fairfield community be compensated?
- What land is proposed to be resumed by TfNSW from Council?
- What new land is proposed to be handed over to Council by TfNSW?, and;
- List of proposed green assets, for example: trees.

15. CONTAMINATION

The preliminary desktop contamination review along the project area has identified some areas where potential contamination may exist, based on historical review of land uses and aerial building footprint analysis.

Recommendation 17 – Any contamination register developed must be provided to Council as part of a condition of consent. Detailed Site Investigation report and any further sampling and analysis must be provided to Council.

16. CONSTRUCTION PHASE DUST EMISSIONS

It is noted that populations within the Horsley Park area were identified to be more vulnerable to air pollution and potential air quality impacts, based on an Index of Relative Socio-economic Disadvantage (IRSD).

Despite the above, construction zones located with the Fairfield LGA were found to pose only a moderate risk of exposure to dust (in the absence of mitigation measures) due to the "*proximity of highly sensitive receptors to the construction areas*".

Mitigation measures as outlined in Table 7.34 will be included within a construction environmental management plan.

Recommendation 18 - The agency and individual accountable for air quality and dust issues shall be clearly identified and responsibilities outlined for the whole duration of the project.

It is expected that a clear communications plan will be developed and residents notified of a simple pathway to address any air quality issues that may be happening at the time and the person/s responsible. Particular attention should be given to those areas such as Horsley Park with a quintile factor of 1 and the best means of communication and interaction with those community groups, in ensuring that mitigation measures are sufficient, effective and being properly maintained

CONCLUSION

This submission includes a number of detailed recommendations endorsed by the Fairfield City Council that need to be addressed under DPE's further assessment of the proposed widening of the M7 corridor for additional vehicle lanes

Council officers would be available should the DPE require any further clarification on the above. Should you have further questions please do not hesitate to contact the undersigned on 9725 0215.

Patrick Warren
Senior Strategic Land Use Planner

Appendix D-5 – Blacktown City Council

Blacktown
City Council

Your ref: SSI-663-MOD 6
File no: MC-22-00002

30 August 2022

NSW Department of Planning and Environment
GPO Box 39
SYDNEY NSW 2001

Recipient Delivery Jonathon.Kerr@planning.nsw.gov.au

Attention: Jonathon Kerr

Dear Mr Kerr

State Significant Infrastructure-663-MOD 6- Widening of M7 Motorway

Please find attached comments from Blacktown City Council in relation to the proposed widening of the M7 Motorway.

The project is a State Significant Infrastructure proposal under Section 5.12 of the *Environmental Planning and Assessment Act 1979,* extending from Prestons to Oakhurst.

The proposed modification has been developed in response to an unsolicited proposal prepared by the current operators of the M7 Motorway. Council understands that the government has been actively considering the proposal for some months. However, the State Government has seen fit not to brief Councils in advance and has provided the community and Councils 21 days to digest the details and prepare submissions.

The proposed modification to the existing consent is expansive in area and has complex relationships with a wide range of transport and community considerations.

Blacktown City Council wishes to object to the proposal for a range of reasons, including:

- The tokenistic nature of the engagement with Councils and the wider community, most likely contrary to the Secretary's Environmental Assessment Requirements
- The opportunistic nature of the project and its lack of integration and co-ordination with other important considerations, in particular:
  - The general lack of any strategic basis for the proposal in State Government plans
  - Flood evacuation
  - Compliance with previous conditions of consent in relation to public transport
  - The future design and upgrade of Richmond Road
  - The design of junction of the M7, Castlereagh connection and Richmond Road
  - The provision of regional road infrastructure within the North West Growth Area
  - The various transport associated design shortcomings of the current proposal
  - The failure of the project to explore opportunities to respond to local circumstances and knit communities back together
  - The failure of the design to address issues associated with urban heat
  - Noise mitigation for operational impacts is insufficiently explored.

- Furthermore, Blacktown City Council requests that any information provided by the proponent in relation to the matters raised by Council, be referred back to Council for reconsideration before any determination is made by the Department of Planning and Environment.

If you would like to discuss this matter further, please contact Judith Portelli, our Manager Development Assessment, on 9839 6228.

Yours faithfully

Peter Conroy
Director Planning and Development

Blacktown Council's submission to SSI-663-MOD 6: M7 Motorway Widening.

Contextual Issues

- History of M7 and original M7 Approval
- Changes in Western Sydney since that time
- State Infrastructure Strategy 2022 - 2042
- Future Transport Strategy 2056
- Metropolitan Plan
- District Plans
- Outer Orbital
- Northwest Growth Sector
- Metropolitan Resilience
- Castlereagh Connection
- Richmond Road
- Flood Evacuation
- Failure to consider local documents and circumstances
- Lack of consultation
- Land acquisition

Traffic Concerns

- Operational traffic impacts and concerns
  - South facing ramps
  - North Facing Ramps
- Operational intersection performance impacts the wider road network
- Choke point – Richmond Road and M7
- Cycleway network connectivity
- Construction traffic impacts and concerns
- Concluding traffic comments and recommendations

Environmental Concerns

- Climate change
- Climate change opportunities
  - Active Transport and Public Transport
  - Vegetation and canopy cover
  - Design
  - Urban Heat
  - Water cycle management
  - Materials
- Operational Noise Impacts

Social Planning Concerns

- Social Impact Assessment - use of LGA-wide SEIFA and IER ratings rather than ratings for the social locality
- A focus on impact during construction and Inadequate assessment of ongoing operational impacts
- Failure to consult with councils as key stakeholders
- Failure to directly address community concerns Increased traffic volume and impacts on surrounding Road Network

- **Active transport connections and movements across road reserve**
- **Upgrade of shared path**
- **Noise and air quality**
- **Toll charges**

- **History of M7 and original M7 Approval**

Project approval for the Western Sydney Orbital was granted on 28 February 2002 to construct a 40 km freeway linking the M5 at Camden Valley Way to the M2 at Baulkham Hills – Refer SSI-663. The approved project comprised 4 lanes of traffic, pedestrian / cycle paths and a 15m wide median to facilitate the future provision of public transport. The project was opened in December 2005. The following original conditions of approval are relevant to the current proposal:

Public Transport Enhancement Measures

Pre-construction Stage

36. The Proponent shall, in consultation with the DoT, design the Project to accommodate the future provision of public transport facilities. Consideration shall include but not be limited to, the requirements for bus and light rail stops/stations, bridge crossings, vertical and horizontal clearances and alignments, and pedestrian and bicycle access such that retrofitting for dedicated public transport use is not precluded in the future.

In addition to condition 36, condition 42 required the proponent (operator) to regularly review the operation of the freeway and assess the potential demand for public transport services.

Operation Stage

42. Five (5) years after the opening of the Project to traffic and every ten (10) years subsequently up to 25 years, the Proponent shall review the potential demand for dedicated public transport services on the Project to the satisfaction of the Department of Transport and shall implement any such measures as agreed between the Proponent and the Department of Transport.

The exhibited documents dismiss the need for public transport and do not provide any analysis of future likely need for public transport along the motorway.
Section 4.2.9 of Modification Report states the following:

> *As described in Chapter 3 (Need for the modification and strategic context), current transport strategies do not identify the Westlink M7 as a strategic public transport route. However, the design of the proposed modification would not preclude use of the motorway for public transport facilities (e.g. on the new traffic lanes) in the future should there be a change to strategic transport policies.*

Whilst there is a statement that the proposed works do not preclude future use of the motorway for public transport facilities, no analysis, investigation of the costs of retro fitting a future public transport option, or other evidence is provided to support this statement. It is a fundamental requirement of the original consent (Condition 42 above) for the motorway that the need for public transport be reviewed 5 years after opening and then every ten years.

The most recent of these reports should be included in the exhibited documents in addition to cost benefit analysis of how public transport could be accommodated in the widening proposal.

Modifications to the Original Approval

The current approval has been modified on previous occasions, namely:

Reference	Nature of Modification sought	Approval Date
Mod 4	Removal of requirement to maintain pedestrian and cycle access across the M7 at Rooty Hill	24 January 2006
Mod 5	Removal of prohibition on commercial outdoor advertising	18 July 2019

Both of these modifications worked to the advantage of the proponent/ operator.

Mod 4 reduced the annual operating costs whilst at the same time further dislocating local communities located on either side of the freeway.

Mod 5 increased the income flow as a result of increased revenues flowing form the commercial outdoor advertising.

- **Changes in Western Sydney since that time**

Blacktown City has 48 suburbs and 142 schools with several more proposed in the rapidly expanding new housing developments in the North West Growth Area suburbs including Marsden Park, Schofields and Riverstone.

The city has experienced rapid growth in our resident population and the size of our economy. From 2016 to 2021, the residential population grew from 348,000 to 395,000 people and our economy grew from $17.3 billion to $22 billion. Blacktown City now has the largest population in New South Wales, the 3rd largest economy in New South Wales by Gross Regional Product, and the 2nd fastest growing economy.

Blacktown City's current population of 400,000 people and is projected to be more than 522,000 by 2036 - an increase of almost 1/3rd (31%) in just over 15 years. Blacktown now manages 1,466km of roads - over 90% of the total road network, comprising 1,379km of Local roads and 89km of Regional roads.

The impacts of COVID-19 on Western Sydney clearly highlighted the importance of Western Sydney to Sydney's supply chain, housing construction and employment opportunities.

New housing developments in the north west growth area are placing ever increasing demands on local transport infrastructure and highlighting the need for in injection of funds to address a range of current transport issues. For example, the need to widen Richmond Road. Richmond Road is a state arterial road. Transport for NSW project documents advise that the existing road network does not have the capacity to meet the expected growth in transport demand that will result from the increased population and new homes. In the next 5 years to 2026, Richmond Road traffic is estimated by Transport for NSW to almost double from 34,300 to 65,600 vehicles each day.

- **State Infrastructure Strategy 2022 – 2042**

The updated State Infrastructure Strategy 2022 – 2042 makes specific references to:

- Lifting the performance of Greater Sydney
- Supporting emerging industries in the Western Parkland City
- Supporting accessibility and the liveability of the Central River City.

However, at no point in the document does it make any reference to the M7 and/or increasing the capacity of the M7 Motorway.

- **Future Transport Strategy 2056**
  Future Transport 2056 devotes an entire Chapter (Chapter 8) to the *Greater Sydney Network*. – Refer Pages 125 – 142. In doing so the document considers issues associated with:
  - The 30-minute city and the role of public transport
  - The need to invest in mass transit to shape a sustainable urban form and grow jobs in the Western Parkland City
  - The protection of the Western Sydney freight line connection to Port Botany
  - Lifting the performance of Greater Sydney
  - Supporting emerging industries in the Western Parkland City
  - Supporting accessibility and the liveability of the Central River City.

  At no point in the document does it make any reference to the M7 or increasing the capacity of the M7 Motorway.

- **Metropolitan Plan**
  The Metropolitan Plan notes:
  - the unprecedented levels of housing development that is increasing the demand on infrastructure and services across the region
  - increasing community standards in relation to the quality and timely provision of infrastructure, amenity and place
  - that as Greater Sydney grows and becomes more complex, there is a need to design better ways of supporting growth and delivering appropriate infrastructure in the right places.
  - the need to act in ways that give the community confidence that the region is being planned and developed responsibly and sustainably
  - the need to foster and co-ordinate a whole-of-government approach to the provision of appropriate infrastructure in the right places to support growth
  - its relationship with Future Transport 2056 and the State Infrastructure Strategy 2018–2038.

  Specific actions and objectives from the Plan relate to Infrastructure and Collaboration and include:

  - The coordination land use and infrastructure to align growth with infrastructure
  - Prioritising infrastructure investments to deliver maximum benefits for the community.

  The Metropolitan Plan makes no specific observations or recommendations in relation to increasing the capacity of the M7 Motorway.

- **District Plans**
  The M7 Motorway traverses two of the three District Plans, commencing at Camden Valley Way – in the Western Parkland City and concluding at the M2 – in the Central River City. Likewise, the location of the currently proposed development runs between Prestons – in the Western Parkland City and concluding at Richmond Road – in the Central River City.

  As with the Metropolitan Plan, the two District Plans makes no specific observations or recommendations in relation to increasing the capacity of the M7 Motorway.

- **Outer Orbital**
  Transport for NSW consulted on a proposed corridor for the Outer Sydney Orbital for a possible future motorway and freight rail line. The consultation period finished in June 2018.

  In response, the State Government resolved to:

  - Continue with the previously gazetted 1951 corridor for the Bells Line of Road Castlereagh Connection
  - Relinquish the section of the Outer Sydney Orbital north of Richmond Road
  - Provide for a future tunnel of approximately 10 kilometres from Cobbitty to Cawdor to minimise the impact of the Outer Sydney Orbital on communities at Cobbitty, Brownlow Hill, Grasmere and Ellis Lane.
  - Delete the proposed rail loop through the Dunheved Industrial area.

  The currently proposed Outer Sydney Orbital does not integrate with the M7 Motorway as it is currently proposed to terminate at Richmond Road. This will cause substantial traffic congestion and delays along Richmond Road.

- **Northwest Growth Sector**
  In 2014, the NSW Government released its North West Growth Centre Road Network Strategy to support the forecast growth in the North West Growth Area. This strategy provided for the upgrade of 5 regional roads plus associated rail crossings and included:
  - Bandon Road – to be provided when 25% of development within the Growth Area was completed.

    Development in the North West Growth Area is currently estimated at 38% complete, yet there is still no commitment to commencing the Bandon Road upgrade and extension, nor even commencing design.

  - Garfield Road – to be provided when 75% development within the Growth Area is complete.

    As with the other nominated upgrades, Garfield Road provides a strategically important east-west link through the North West Growth Area, connecting Richmond Road and Windsor Road (State Arterial Roads). It currently intersects with the Richmond Railway Line at-grade and functions as the 'main street' through Riverstone.

    A grade-separated railway crossing has appeared in NSW Government documents for over two decades. In 2014, the NSW Government prepared a design to replace the at-grade rail crossing with an overpass along the Garfield Road corridor. It required the acquisition of businesses on the southern side of Garfield Road, effectively removing its function as the main street of the Town Centre.

    Transport for NSW has recently advised that it is now commencing a re-investigation of options to upgrade Garfield Road through the Riverstone Town Centre, including an option to locate the rail line over Garfield Road.

- **Metropolitan Resilience**
  Sydney's current State Road Network, as it extends to the North and the West is restricted by the local geography. Options for motor vehicles moving to and from the North and West are limited to 2 main all weather routes, the Pacific Highway and the Great Western Highway.

  As a consequence, incidents on either route lead to congestion and delays, impacting on all things ranging from journey to work to transport and logistics. A more resilient State Road Network is required to accommodate the shocks and stresses that arise as a result of these incidents.

  In the case of Western Sydney, a second high-level crossing of the Hawkesbury River is required, thereby facilitating a viable alternative route to Western NSW via the Bells Line of Road.

- **Castlereagh Connection**
  As stated earlier, the Castlereagh connection corridor was gazetted in 1951. The Castlereagh connection is proposed to intersect with the M7 at its junction with Richmond Road.

  Completion of the Castlereagh connection would play a significant role in establishing a viable alternative route to Western NSW via the Bells Line of Road. It would also remove traffic from the already chronically congested Richmond Road.

  The design of the interchange at the intersection of the Castlereagh connection, the M7 and Richmond Road needs to be progressed as a matter of priority. Any upgrade of the M7 Motorway needs to be able to accommodate the proposed interchange design.

- **Richmond Road**
  Richmond Road is a key commuter and freight route. It links the Marsden Park Business Park with the M7 Motorway. It is also provides an alternative route over the Blue Mountains to Western NSW. It is already operating above capacity with traffic struggling for most of the day through heavily congested Marsden Park.

  The future Outer Sydney Orbital does not integrate with the M7 Motorway as it is currently proposed to terminate at Richmond Road. This will cause substantial traffic congestion and delays along Richmond Road.

  The traffic report identifies traffic increases across the wider road network, as a result of the M7 attracting traffic from the surrounding network.

  Traffic modelling identified that congestion will worsen to level of service (LOS) E and F in the morning or afternoon peaks. This will require upgrade of the Richmond Road intersections at Rooty Hill Road North and M7 entry and exit ramps.

  The major intersection interchange of Richmond Road with M7 and Rooty Hill Road North is the key network choke-point that causes traffic congestion along:

  - Richmond Road eastbound towards Symonds Road
  - Along Richmond Road west through Marsden Park
  - Along Rooty Hill Road North south towards Luxford Road

- Causes traffic to queue on the northbound M7 Motorway exit ramp to Rooty Hill Road North and Richmond Road.

Transport for NSW estimates that Richmond Road traffic flow will increase significantly, from regional background traffic and the redevelopments of Marsden Park and Marsden Park North:

- Richmond Road in 2018- 34,300 vehicles per day
- Estimate for 2026 - 65,600 vehicles per day (almost twice that in 2018)
- Estimate for 2031 - 78,500 vehicles per day - Bandon Road connected to Richmond Road
- Estimate for 2036 - 80,500 vehicles per day (more than twice that in 2018)

In the next 5 years to 2026, Richmond Road traffic flow is estimated by Transport for NSW to almost double from 34,300 vehicles per day to 65,600 vehicles per day.

Any proposal to increase the capacity of the M7 needs to be developed in the context of the surrounding road network and the need to co-ordinate actions so as to avoid adverse impacts elsewhere.

- **Flood Evacuation**
  The State Government's *Resilient Valley, Resilient Communities* flood risk management strategy for the Hawkesbury Nepean Valley was released in 2017. The study noted at the time that

  > *"up to 134,000 people live and work on the floodplain and could require evacuation. This number is forecast to double over the next 30 years."*

  Richmond Road will be a key element of any evacuation strategy. As stated above, Richmond Road is already at capacity and as a consequence its ability to fulfil this flood evacuation role will be limited by:

  - its inability to accommodate additional vehicle movements in a short period of time
  - the weather conditions that are likely to be prevailing at the time.

  Resolving the current capacity and design issues associated with Richmond Road need to be dealt with as a matter of priority and in advance of any upgrade of the M7.

- **Failure to consider key documents and local circumstances**
  The exhibited documents fail to address key state and local council strategy documents. The proposal does not enhance the environment where it is located, nor does it improve accessibility and connectivity for communities and public spaces.

  Western Sydney and Blacktown in particular has changed dramatically since the M7 Motorway was designed and constructed in the early 2000's. Whilst the M7 off road cycleway and the links to adjacent residential areas may have been state of the art in 2002, today in 2022 it falls well short of what the Western Sydney communities affected by the M7 need and deserve.

The widening of the M7 is a once in a lifetime opportunity to restitch communities that were severed by the construction of the M7. Such a project can provide existing and new communities with walking and cycling access to regional and local facilities like the Western Sydney Regional Parklands.

The State Government has a suite of initiatives to encourage active transport that promote and recognise its benefits. There is a great opportunity for this project to ensure that the people of Blacktown and Western Sydney enjoy improved and excellent active transport routes along and across the M7. Given the user catchment of the existing M7 cycleway, the whole of Sydney would benefit from the incorporation of appropriate conditions in relation to additional active transport elements.

The proposal to widen the M7 Motorway fails to address specific requirements of the Secretary's Environmental Assessment Requirements (SEARs) relating to active transport and improving accessibility and connectivity for communities and public spaces. The widening proposal does not provide for any enhancement in the active transport between the areas severed by the motorway or strategically analyse the M7 cycleway. No investigation of increased active transport needs since the motorway was initially built has been undertaken within the exhibited documentation.

The proposal ignores the negative and permanent effects of the motorway on people movement. The documents narrowly focus on vehicle movement along the motorway when they discuss improving connectivity. Improving connectivity for other forms of transport, such as active transport is ignored. The proposed widening does not align to the guiding principles of the Future Transport Strategy 2056, nor has early collaboration with stakeholders taken place.

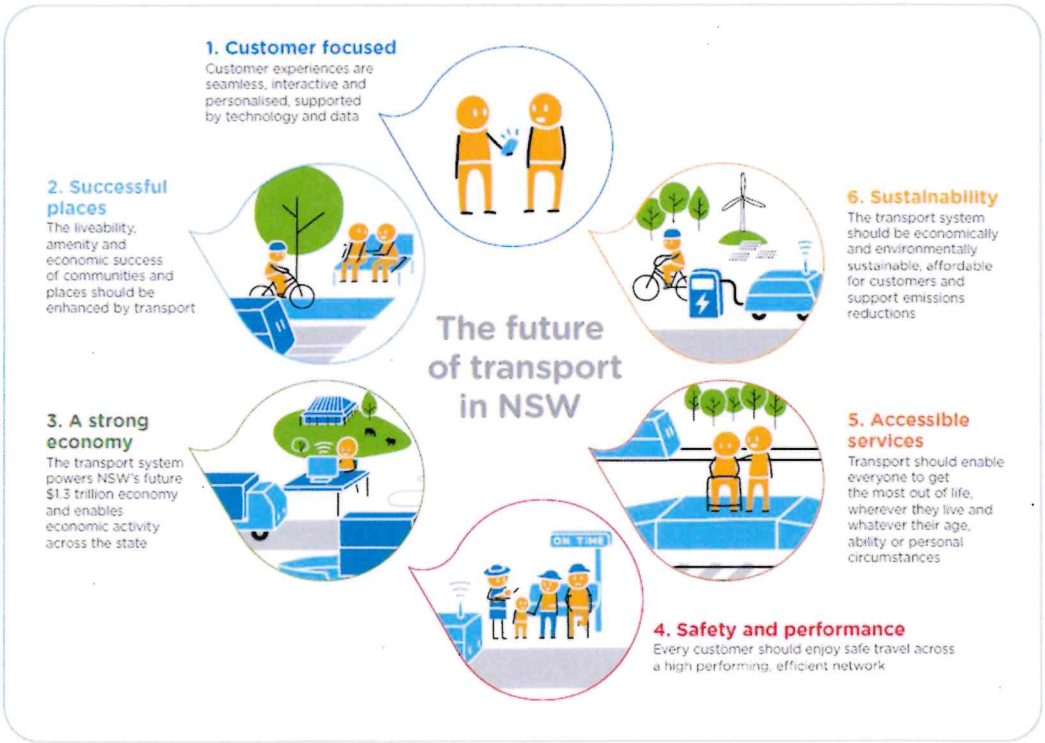


Figure 1: Future Transport 2056

The project documentation fails to review the implications of a number of changes that have occurred in Western Sydney and how these changes manifest in the need for improved access across the motorway for local and regional communities. Examples include the following:

- Since 2002 the vast majority of the Western Sydney Regional Parklands are now open to the public. The parklands extend and straddle the majority of the M7 motorway
- Ignoring the regional attractions that have been developed, are underway or are planned that create the need for improved connections between communities severed by the M7 such as the *NSW Disability Centre of Excellence* - Blacktown and the *Blacktown Exercise Sports and Technology Hub* which is currently under construction and due for completion in early 2023
- Ignoring the increased density of development expected around existing heavy rail infrastructure and growth and redevelopment occurring or planned in areas adjacent to the M7
- Ignoring changing travel needs resulting from population growth and facilities provision
- Failing to analyse Blacktown's population change and the implications of these changes. Blacktown has grown from 216,974 in 2001 to 399,711 in 2021 and is forecast to grow to 522,000 people by 2036
- Failing to analyse or comment on the implications of rise in popularity of cycling as a means of commuter and recreational transport
- Failing to analyse or comment on the rise of e-transit (micro mobility) alternatives
- Failing to consider the commencement of Australian Catholic University at the Blacktown Sports Park in 2021 and the need to provide active transport link from Rooty Hill station across the motorway to the Blacktown Sports Park
- Does not seek to achieve the State Government's targets to increase walking and cycling mode share despite the obvious opportunities that exist to do so
- Does not explore in any meaningful way (using available data and analysis) the further potential of the M7 cycleway to enhance walking and cycling mode share either along the cycleway or across it. In this regard, limited (no off-road cycle way count information, only on-road cyclists have been identified) counting and assessment of the impact on the many thousands of cyclists who use the M7 cycleway appears to have been undertaken
- Greatly ignores and underplays the importance of the M7 cycleway to all Sydneysiders, not just Western Sydney residents – no usage data for this cycleway is presented.

The Strava heat map below shows comparatively how popular the M7 cycleway is in the context of Sydney metropolitan cycling (Note: the brighter line indicates higher cycle traffic)

Strava Cycling Heat Map 17/5/22

Blue dot = Blacktown CBD

Source https://www.strava.com/heatmap#12.08/150.96824/-33.76281/blue/ride

The Proposal has failed to strategically assess the contribution of the M7 cycleway is making to active transport in Western Sydney and how it links to and could enhance the wider active transport and public transport networks.

Additionally, it does not review the current operation, fabric and environs of the M7 cycleway. Nor does it identify any upgrades or changes that would improve user experience, safety, amenity or connections to surrounding areas.

The proposal purports to have consulted with the community, but confined this consultation to a very narrow band of land beside the motorway corridor. The survey focussed on interim construction impacts/inconvenience. No conversation about wider active transport needs or ideas for active transport improvements or indeed environmental improvements were canvassed with the community.

There is no discussion or analysis about Western Sydney as a place and its character and how that character is evolving. The proposal fails to contribute to enhancement of 'place' along the entire motorway, there are no proposals for additional public art, lighting features, entry statements to suburbs or improved wayfinding. There is no analysis of the public domain and place making contribution that the motorway could make nor is there any comparison to other contemporary motorway projects that do this in Australia and worldwide.

Delivering for people and places

Place-based planning recognises that every place is unique and that transport infrastructure and services need to reflect local character and the movement needs of the local community. Place-based planning also responds to the broader challenges facing metropolitan and regional areas, such as adapting to a changing climate, changing demographics, population growth, and supporting healthy lifestyles and social interaction.

A place-based approach to the planning, design, delivery and operation of transport networks recognises the network of public spaces formed by roads and streets, and the spaces these adjoin and impact.

Places also have a complementary relationship with transport networks – movement supports better places by providing connectivity and integrating the movement of people and goods, and transport networks are most rational and productive where they connect and improve the places they serve. This is why we are partnering with local councils and other stakeholders from the start of the planning process to establish a common understanding of local challenges and opportunities, develop a shared vision for land use and transport for the future, co-design ideas and prioritise solutions.

Figure 2: Future Transport 2056

- **Lack of consultation**
  Consultation has been perfunctory, is flawed and in some cases the consultation results reported are very misleading, for example:

  Appendix C the Summary of Stakeholder Consultation reports that a briefing was offered to Council on June 17 and that no response was received from any of the affected Council's or the major utility agencies. It must be noted that **no briefing** was offered in the June 17 email to Blacktown City Council. This email merely advised that our opportunity to comment was during the upcoming exhibition period.

  The Secretary's Environmental Assessment Requirements (SEARs) require that the proposal be informed by consultation with local, State and Commonwealth government agencies. It is clear that the documents have not been informed by consultation. Only during the exhibition phase, was a briefing offered to Council. An email offering a briefing was sent to Council on the 10 August – 7 days after the formal exhibition period commenced.

- **Land acquisition**
  Property acquisition was a key condition of the original development approval SSI-663. Condition 172 (below) specifically related to the matter of property acquisition.:

  Property Acquisition

  Pre-Construction

  172. The Proponent shall identify all properties to be affected by land acquisition and complete negotiations with landholders prior to construction commencement and in accordance with the RTA's Land Acquisition Policy. Where a mutually acceptable arrangement cannot be made using this method, the Proponent shall ensure that the acquisition of any land shall be in a responsive and sensitive manner and in accordance with the Land Acquisition (Just Terms Compensation) Act 1991. The Proponent shall consult affected landowners prior to and during the property acquisition process in accordance with the requirements of Condition No. 174.

  Council is yet to receive compensation for a number of land parcels that are being used for motorway purposes despite multiple requests that this matter be finalised. The following land parcels remain in council's ownership.

After 17 January 2003

Lot		Plan	road name	Notes	Owner
26-45		DP806052	Phillip Parkway	public road (CAR)	Council
14		DP806053	Phillip Parkway	public road (CAR)	Council
46	814.3m²	DP806052	Mavis Street	public road (CAR)	Council
47	1525m²	DP806052	Dunsmore Street	public road (CAR)	Council
48	3542m²	DP806052	Crichton Street	public road (CAR)	Council

Traffic Concerns

- **Operational traffic impacts and concerns**
  The M7 Motorway is currently chronically congested particularly for southbound traffic, and also has limited south-facing and west-facing ramps for access to and from the proposed Western Sydney Airport.

  Access to the M7 Motorway could be improved by providing additional south-facing and west-facing ramps, to improve access to and from the Western Sydney Airport for Western Sydney residents, at the following intersections:
  - Eastern Road, Doonside – south-facing ramps
  - Quakers Hill Parkway – west-facing ramps

  M7 does not have any south-facing ramps between Old Wallgrove Road at Eastern Creek and Woodstock Avenue at Rooty Hill. This results in chronic congestion along Wallgrove Road and Main Road 537 including Wallgrove Road and Rooty Hill Road South.

  M7 does not have any west-facing ramps between Sunnyholt Road at Acacia Gardens and Richmond Road at Glendenning. This results in chronic congestion along Richmond Road especially and also Sunnyholt Road.

Richmond Road is a key freight route linking Marsden Park Business Park with the M7 Motorway that is already operating above capacity with traffic struggling for most of the day through heavily congested Marsden Park.

The future Outer Sydney Orbital does not integrate with the M7 Motorway as it is currently proposed to terminate at Richmond Road. This will cause substantial traffic congestion and delays along Richmond Road.

To resolve this concern the northern end of the Outer Sydney Orbital must not be terminated at Richmond Road.

- **Operational intersection performance impacts the wider road network**
  The traffic report identified traffic increases across the wider road network with the proposed widening, as a result of the M7 attracting traffic from the surrounding network.

  Traffic modelling identified that congestion will worsen to level of service (LOS) E and F in the morning or afternoon peaks. This will require upgrade of the following nearby intersections:
  - Richmond Road at Rooty Hill Road North and M7 entry and exit ramps
  - Great Western Highway at Rooty Hill Road South and Wallgrove Road
  - Wallgrove Road at Old Wallgrove Road and M7 entry and exit ramps

- **Richmond Road at M7 intersection choke-point**
  The major intersection interchange of Richmond Road with M7 and Rooty Hill Road North is the key network choke-point that causes traffic congestion along:
  - Richmond Road eastbound towards Symonds Road,
  - Along Richmond Road west through Marsden Park,
  - Along Rooty Hill Road North south towards Luxford Road, and
  - Causes traffic to queue on the northbound M7 Motorway exit ramp to Rooty Hill Road North and Richmond Road.

  Transport for NSW estimates that Richmond Road traffic flow will increase significantly, from regional background traffic and the redevelopments of Marsden Park and Marsden Park North:
  - Richmond Road in 2018- 34,300 vehicles per day
  - Estimate for 2026 - 65,600 vehicles per day (almost twice that in 2018)
  - Estimate for 2031 - 78,500 vehicles per day - Bandon Road connected to Richmond Road
  - Estimate for 2036 - 80,500 vehicles per day (more than twice that in 2018)

  In the next 5 years to 2026, Richmond Road traffic flow is estimated by Transport for NSW to almost double from 34,300 vehicles per day to 65,600 vehicles per day.

- **Construction traffic impacts and concerns**
  Temporary road closures and associated traffic diversions would only occur at night-time to allow critical construction works. Restricting traffic diversions to commence after 10pm at night is supported, as the estimated traffic volumes for diversions starting at 9pm are more than the workday peak hour traffic volumes on:
  - Wallgrove Road
  - Woodstock Avenue
  - Power Street

The traffic impact assessment identifies that peak hour traffic volumes on Wallgrove Road will increase by 18% from 242 construction vehicles using this road.

- **Summary and recommended actions to address operational concerns**
  Whilst the upgrade and widening of the M7 Motorway may have some merit in terms of reducing the traffic congestion experienced by current users of the M7, it will do little to address a wider range of transport concerns.

  In this regard, the proposal may improve access to the Western Sydney Airport, however it will not address issues associated with current traffic or expected future increased traffic from the growth in new homes from the rapidly expanding North West Growth Area and South West Growth Areas.

  The proposal put forward by the applicant does not adequately respond to the requirements of the Secretary's Environmental Assessment Requirements (SEARs) and does not adequately address deficiencies identified in the traffic impact assessment.
  The following specific actions are therefore suggested to address the operational deficiencies and concerns identified.

  1) M7 Motorway:
     a) Proposed M7 widening to be extended from Richmond Road to the M2 Motorway at Windsor Road – this will provide a consistent 3-lanes in each direction and improve access for Western Sydney residents to and from the proposed Western Sydney Airport.
     b) Additional south-facing ramps at Eastern Road – this would reduce congestion identified at intersections along main roads including Wallgrove Road and Rooty Hill Road South, and improve access to and from the Blacktown International Sports Park, nearby sporting fields, Mount Druitt Fire Station, Mount Druitt Police Station, Mount Druitt Hospital and the new West HQ entertainment venue on Francis Road at Sherbrooke Street.
     c) Additional west-facing ramps at Quakers Hill Parkway – this would reduce congestion identified at intersections along main roads including Richmond Road at M7 Motorway and Rooty Hill Road North, and improve access to the Western Sydney Airport for residents in the rapidly growing North West Growth Area.
  2) Increased traffic from growth and also attracted by the upgrade of the M7 will require the upgrade of the following main roads connecting to the M7:
     a) Main Road link 537 to be widened to 4 lanes along Francis Road, Railway Street, Duke Street, Woodstock Avenue and Rooty Hill Road North, including duplication of the Davis Overpass of the Great Western Rail line at Rooty Hill.
     b) Widen Wallgrove Road to 6 lanes from Wonderland Drive at Eastern Creek to Great Western Highway, including across the M4 Motorway bridge.
     c) Widen Richmond Road to 6 lanes from east of Yarramundi Drive Dean Park to South Creek bridge at Marsden Park.

- **Cycleway network connectivity**
  Additional Shared user path cycleways are required to improve cycle access to and from M7 cycleway network, including along:
  - Richmond Road
  - Great Western Highway
  - Francis Road
  - North Parade for access to Rooty Hill Station

  Additional shared user paths along Richmond Road to connect the cycleway network to the M7 at Richmond Road. Several missing sections are identified along Richmond Road from Balmoral Street at Blacktown to Richmond Road at the South Creek bridge.

Environmental Concerns

- **Climate change challenges:**
  The M7 Motorway is a major arterial road used by heavy transport running along the east transport corridor of Australia. Additionally, it will become one of the main routes to and from Sydney's second airport. There are limited rail and public transport options for transporting goods and individuals between north-west and south-west Sydney and the current planning approach largely relies on heavy road transport and private vehicles.

  It is to be noted that whilst the proposal acknowledges increasing traffic, there is no direct consideration of climate and the requirement to curb emissions.

  It is to be noted that the proposal entails significant vegetation clearing and only includes biodiversity offsets to balance these losses. There is no discussion of tree and vegetation planting close by the proposed upgrade nor consideration of potential for increases in urban heat.

- **Climate change opportunities:**
  Notwithstanding that fact that previously conditioned public transport options have not been publicly explored - if at all, the proposed upgrade offers opportunities for large-scale environment and climate future-proofing. Considerations such as reduced carbon emissions, improved construction practices, integrated water cycle management and the delivery of greenery to address urban heat, create air filtering and buffer zones for residents and wildlife, need to be incorporated into the project.

  In order to progress the Premier's Priority of Greening our City commitment - to plant 5 million trees in Greater Sydney by 2030 for more shade and cleaner air, the proposal should incorporate extensive tree-planting along the road corridor. In addition to benefits for the local micro climate, such initiatives would also enhance the overall design and visual amenity of the road corridor.

To help achieve the NSW Government objective of a 50% cut in emissions by 2030, a new "Urban Heat" driven approach to design is required. This major arterial upgrade should:

- Explore designs that reduce areas of pavement exposed to sunlight
- Incorporate the use of extensive areas of tree canopy, integrated with water cycle management, to reduce urban heat and enhance cooling
- Focus on tendering that requires use of the lowest embodied emissions construction materials and recycled materials wherever possible
- Include charging/fuelling infrastructure for low emission energy e.g. hydrogen fuelling stations and electric vehicle battery charging or swap-over stations that accommodate heavy, light commercial and passenger vehicles.

- **Operational Noise Impacts**
  It is to be noted that there is strong emphasis on construction impacts in terms of noise however there is limited input on operational noise impacts to residents around the M7 transport corridor. As noted earlier, the M7 being a major arterial road carrying both heavy road transport and private vehicles will result in increased noise impacts on residents from increased traffic volumes. The Noise and Vibration report must explore operational impacts and mitigation measures on nearby residents in greater detail.

Social Planning Concerns

- **Summary of Council's Social Impact concerns**
  The Social Impact Assessment prepared by AECOM Australia Pty Ltd fails to meet the Department's requirements for the preparation of Social Impact Assessments. The Department's new Social Impact Assessment guidelines require all State Significant Development's and State Significant Infrastructure proposals to engage in a clear and consistent approach to Social Impact Assessment preparation. The guidelines require Social Impact Assessment to be developed in accordance with the Department's framework and for either a Social Impact Management Plan (SIMP) or clear, conditionable mitigations to be identified. Furthermore, the Social Impact Assessment provided in respect of the project:
  - does not capture the compounding operational impacts of the development
  - uses misleading demographic statistics to develop its recommendations
  - is inadequate and misleading, it lacks rigour and credibility. The widening proposal should not and cannot be assessed without a comprehensive Social Impact Assessment. A new report is required.

- **Specific Areas of concern:**
  - **Generalised use of LGA-wide SEIFA and IER ratings rather than ratings for the social locality defined in Section 4 of the Social Impact Assessment**.
    The report is misleading in its description of that part of the social locality in the Blacktown local government area. While Section 4 of the Social Impact Assessment clearly identifies the locality as being the area surrounding the MY corridor, City-wide averages for SEIFA and EIR are cited. While Blacktown City has some extraordinarily advantaged suburbs, the Doonside/Mount Druitt area straddling this locality contains Australia's most disadvantaged urban communities. 8 suburbs in the area are in the bottom 3% of IRSD ratings. 9 out of 10 of

Sydney's most affordable suburbs are in this area. The area is noted for its generational disadvantage and high levels of poverty.

- **A focus on impact during construction and an inadequate assessment of ongoing operational impacts.**
  It is evident there will be social impacts during construction that will need to be mitigated during that period. The report is correct in observing that regulatory controls and conditions of approval will effectively deliver the mitigations for these impacts, however it then devotes lengthy sections to dealing with these. It provides far less analysis or identification of potential ongoing operational impacts on traffic, amenity and cohesion. It is to be noted that these were identified in the SEARS consultation process.

- **Failure to consult with councils as key stakeholders, as required by SEARs**
  The consultation process appears to have been severely truncated, and consisted of a random sample of selected sections of some communities. This limited consultation excluded key stakeholders including councils, schools, major retail and State government agencies.

- **Failure to directly address concerns raised by the community in the limited consultation that did occur.**
  The Social Impact Assessment reports benefits and concerns raised by community in the consultation, particularly in relation to the operational phase, but does not address these or provide mitigation strategies.

- The above identified shortcomings occurred despite the Social Impact Assessment acknowledging these items were required. The Social Impact Assessment acknowledges that:

  "an assessment of the following issues must be undertaken in accordance with the commitments in Attachment 2 of the Westlink M7 (SSI 663) – Project Modification letter submitted 9 May 2022':

  - *Assess potential social impacts of the project from the points of view of the affected community/ies and other relevant stakeholders (i.e. how they expect to experience the project). How environmental changes and environmental changes and impacts arising from the construction and operation of the project may affect:*
    - *health and wellbeing*
    - *people's way of life and livelihoods*
    - *surroundings (including natural values) and culture, including the connection and value place on the land by local Aboriginal communities*
    - *affected communities, including composition, cohesion and people's sense of place; access to and use of infrastructure, local services, and facilities."*

- **Key operational impacts need to be addressed including:**
  - **Increased traffic volume**
    While the Social Impact Assessment rightly observes the benefits of increased traffic flow on the M7, it provides no analysis of the capacity of the surrounding road system to cope with an increased traffic flow. While upgrades are occurring to several of these roads, other roads are currently failing to cope – the upgraded Richmond

Road is already failing, without a potential increase in volume. Increased traffic volumes and the failure of surrounding road networks would significantly impact the quality of life and wellbeing of those communities and impair the amenity and safety of surrounding suburban roads.
This issue goes directly to the community's concerns about traffic and congestion, and feeling safe and secure, and their desire for reduction of congestion. The Social Impact Assessment needs to address the ongoing mitigation of these issues during operation.

- **Active transport connections and movements across road reserve**
  The M7 already presents a considerable east-west barrier within the communities through which it passes. Crossings and connections are heavily vehicle dominant and present significant safety challenges for the young, elderly and people with mobility challenges. Non-vehicle crossings are primarily associated with the shared path and are spaced at substantial intervals. Blacktown Council is seeking to add a pedestrian pathway to a creek crossing to provide an underpass near Blacktown International Sports Park, but there are few other underpass opportunities.
  This lack of permeation presents significant barriers to community connection and cohesion and should be addressed in the Social Impact Assessment. This would also reflect the community value identified in the consultation of 'Sense of community'.

- **Upgrade of shared path**
  The Social Impact Assessment notes the amenity of the shared path will be impacted by the road widening, at least with regard to aesthetics. The lack of greening and trees, together with the projected increase in days over 35 degrees in western Sydney will result in a general heating of this path. The Social Impact Assessment should address this effect and the community value identified in the consultation of 'Parks and landscape features', by considering the installation of water stations and shaded rest areas.

- **Noise and air quality**
  The Social Impact Assessment notes the potential health impacts of poor air quality – respiratory health issues, asthma, allergies – and noise – sleep disturbance, annoyance, children's school performance and cardiovascular health. The Social Impact Assessment addresses these factors during construction, but both will continue to be significant impacts during operation. The Social Impact Assessment mentions the apparent installation of additional noise barriers but provides no detail of these. The Social Impact Assessment notes an Air Quality Assessment of Pollutants predicted emissions of carbon monoxide and particulate matter would increase but noted 'these predictions are relatively minor in the context of the NSW EPA criteria.'

- **Toll charges**
  No mention was made of toll charges in the Social Impact Assessment. Any increase in tolling of roads in western Sydney would increase the burden on the highest tolled population grouping in the country. The already-high rates of social disadvantage and poverty in the area would severely impact the communities along the M7 corridor.

Appendix D-6 – Western Sydney Airport

Western Sydney Airport

25 August 2022

Department of Planning and Environment
Locked Bag 5022
PARRAMATTA NSW 2124

Attn: Jonathan Kerr

Dear Jonathan,

SSI-663 Mod 6 – M7 Widening
Western Sydney Airport Submission

Western Sydney Airport (WSA) is the Airport Lessee Company responsible for developing and operating Western Sydney International (Nancy-Bird Walton) Airport (WSI). We are writing in response to the exhibition of SSI-663-Mod 6, which relates to the widening of the M7 Motorway.

WSI will be a major national aviation asset and is one of the most significant infrastructure projects under construction in Australia. WSA has been working collaboratively with Transport for New South Wales (TfNSW) and the Department of Planning and Environment (DPE) on the strategic transport planning of the Western Sydney Aerotropolis (Aerotropolis) and other roads surrounding WSI.

The M7 Motorway is a critical connection for WSA, in that it provides for connectivity between the Airport (via the M12 Motorway) and large parts of the arterial road network in Sydney. On this basis, WSA notes its support for this project, which will be a critical phase of the journey for passengers travelling to and from WSI.

WSA's comments in relation to this application are detailed below.

Strategic Need for the Project

WSA agrees with the significant strategic need for this project in ensuring a high quality, high capacity road connection between key destinations in Western Sydney, including WSI. The nature of this project will provide for improved network connectivity and capacity between WSI and key destinations including North-West Sydney, Inner Sydney and South-West Sydney.

It is also noted that the project is anticipated to commence construction from 2023, with target completion by 2025. This would align with the opening of the M12 Motorway and commencement of passenger services at WSI. This is supported as it will mitigate construction impacts on WSI traffic in the initial years of operation. However, with overlapping programs, delivery should not be at the expense of ensuring completion of the M12 as a priority, nor the M12 direct connectivity to suburbs east of the M7.

Western Sydney Airport

Wildlife Attraction

Where possible, WSA needs to minimise the potential aviation safety risk from increased wildlife attraction, notably birdstrike to landing and departing aircraft.

A significant portion of the proposed project footprint is within the 8-13km wildlife buffer zone of Western Sydney Airport, as prescribed by *State Environmental Planning Policy (Precincts – Western Parkland City) 2021* (WPC SEPP). An excerpt of the Aerotropolis SEPP map is provided below for reference, which demonstrates the section of the project which is located within the 8-13km buffer from WSI in red.

Noting that the proposal includes the provision of substantial landscaping, the planting species proposed should be considered in the context of wildlife attraction / aviation risk and replaced with alternatives where increased risk is likely. High risk species indicatively proposed at Table 8 in the Urban Design, Landscape and Visual Impact Assessment (Appendix K) include the following:

- *Allocasurarina torulosa*
- *Eucalyptus (various types)*
- *Acacia parramattensis*

A number of other tree species proposed that would need to be mitigated (through maintenance, spacing of planting, use as feature trees, or other measures) in order to have an appropriate wildlife attraction impact include:

- *Casuarina glauca*
- *Banksia spinulosa*
- *Bursaria spinosa*
- *Meleleuca linariifolia 'Snowstorm'*
- *Acacia falcata*
- *Acacia longifolia*
- *Angophora floribunda*

Further assessment of landscaping choices of the proposal by a wildlife hazard risk consultant would help to confirm the wildlife attraction risk of the project. WSA would be willing to work with TfNSW through this process, if required. Direction could also be gained from the M12 Motorway team, which has carefully considered this issue in the design of the M12 Motorway.

Western Sydney Airport

Recommendation: That a review of wildlife species is undertaken in the area highlighted red on the figure above, including direction from the M12 Motorway team in relation to wildlife species selection.

On-ramp / Off-ramp Capacity

Within the Traffic and Transport Assessment, a number of key roads that interface with the motorway are identified as having poor Level of Service Performance either with or without the project, including:

- Bernera Road / Yarrawa Street M7 Ramps
- Cowpasture Road M7 Ramps
- The Horsley Drive / Wallgrove Road M7 Ramps
- Old Wallgrove Road / Wallgrove Road M7 Ramps

WSA notes that these intersections will need to be upgraded in order to deliver the full benefits of these roads. Upgrade of these intersections need to also consider cumulative impacts of additional traffic in the area resulting from other projects, particularly those associated with the Western Sydney Aerotropolis.

Western Sydney Airport

Pedestrian and Cyclist Management Plan

Page vi of the Traffic and Transport Assessment (Appendix D) notes that *"a pedestrian and cyclist management plan will be prepared by the construction contractor in consultation with stakeholders, councils and Transport and implemented to manage potential impacts during construction."* WSA requests an opportunity to be consulted on this plan.

Recommendation: That WSA be included in consultation of the Pedestrian and Cyclist Management Plan.

Next Steps

Thank you for the opportunity to comment on the M7 Motorway widening modification application. We look forward to working with you following exhibition of this documentation.

We will be available to answer any queries or clarifications you have in relation to this submission. If you have any questions, please contact kosborne@wsaco.com.au or tsmith@wsaco.com.au.

Yours sincerely

Kirk Osborne
Executive Manager, Land Use Planning and Approvals

Appendix E – M7 Widening Aboriginal Engagement Report

Appendix F – Non- Aboriginal heritage addendum Statement of Heritage Impacts

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21 October 2022

To Transport for NSW

This Addendum has been prepared to the non-Aboriginal technical paper that includes a Statement of Heritage Impact (SOHI) (AECOM Australia Pty Ltd, 2022b) to respond to the agency advice received from Heritage NSW (reference HMS ID 1296) on the proposed Westlink M7 (Mod 6 Widening) modification, Western Sydney Orbital (SSI-663-Mod-6). Specifically, the Addendum SOHI addresses the recommendations in that agency advice letter:

> *Heritage and archaeology*
>
> *a) An addendum Statement of Heritage Impact (SOHI) for the Upper Canal System (SHR 01373) should be prepared by a suitably qualified heritage consultant in accordance with the guidelines in the NSW Heritage Manual. The addendum SOHI should include:*
>
> - *revised heritage significance assessment, including the significance of the timber beams associated with the ballast fill and No. 4 Shaft, considered within the context of the SHR item*
> - *revised assessment of the impacts of the proposal on the SHR item, including consideration of the timber beams as (potential) in situ elements*
> - *revised discussion of the attempts to avoid and/or mitigate the impact on the heritage significance or cultural heritage values of the SHR item*
> - *revised discussion for any changes to the heritage fabric including any options analysis, including consideration of the timber beams*
> - *compliance with relevant Conservation Management Plan(s).*

This Addendum SOHI has been prepared to provide the additional information as requested by Heritage NSW. This document only details the information that is relevant to Shaft No. 4 of the Upper Nepean Canal and should be read in conjunction with the Non-Aboriginal heritage technical paper (Appendix J) of the Modification Report.

Upper Canal System and Shaft No. 4

The Upper Canal is listed on the State Heritage Register as the "Upper Canal System" under the *Heritage Act 1977* (NSW) and includes the entire length and area of the Upper Canal corridor and all related water supply components.

The Project area for the proposed M7 Widening crosses the Upper Nepean Canal System at Cecil Hills, immediately to the North of Elizabeth Drive (Figure 1 and Figure 2). The Cecil Hills Tunnel forms part of the Upper Canal System and was reported in the Statement of Heritage Impact prepared for the Modification Report to be located around 30 metres below the current road level of the Westlink M7. Based on further information gained since exhibition that the original construction of the Westlink M7 in this area was done 'at grade' with the road built up above the former ground level (PPK Environment & Sinclair Knight Merz, 2000), it is believed the Westlink M7 at the location of Shaft No.4 is approximately 5-10 metres higher than the former ground level, making the tunnel 30-40m below the current road level.

Although described in the 2002 Conservation Management Plan (CMP) as an air shaft, later research has found that Shaft No. 4 is one of seven shafts sunk directly through the hillside above to the tunnel during its construction in 1883 to allow for multiple work faces in the tunnel (Figure 3; SMEC Australia Pty Ltd, 2019:5). The fabric of Shaft No. 4 is not described in either the 2002 or 2016 CMP, however

the 2002 CMP notes that it was capped by a cylindrical sandstock brick structure with an iron and steel cover (Edward Higginbotham & Associates Pty Ltd, 2002:Volume 2, 65).

Owing to difficulty of access to Shaft No. 4's location in the existing median of the Westlink M7, a site inspection of Shaft No. 4, either from the surface or from Cecil Hill Tunnel, was not conducted. In the median the shaft is currently covered over with a concrete cap, and entrance to the shaft via the tunnel area is not possible (Plate 1). The Technical Report (AECOM Australia Pty Ltd, 2022b) relied on the limited historical information that is available for the item, and the condition assessment report of the Cecil Hills Tunnel portion of the Upper Nepean Canal undertaken by SMEC in 2018.

The condition assessment (SMEC Australia Pty Ltd, 2019:9) involved an inspection, during which a photograph of the lower portion of Shaft No.4 was taken from the Cecil Hills Tunnel looking up Shaft No. 4. The photograph shows timbers installed uniformly over the ceiling of the tunnel inside the shaft, with stone ballast material visible between the gaps (Plate 2) (SMEC Australia Pty Ltd, 2019:9). These timbers are located at the base of the shaft, around 1.5 metres above the ceiling of the tunnel, and approximately 30-40 metres below the current surface of the Westlink M7 (Figure 3). All other shafts were observed to have been bricked up, with their locations possibly evidenced by localised efflorescence and water seepage at the crown of the tunnel. SMEC notes that these other shaft locations had been sealed with brick, with the assumption that this had been carried out at the completion of construction (SMEC Australia Pty Ltd, 2019:9).

There is little information available regarding the remains of Shaft No. 4, or the other shafts that were constructed along the Cecil Hills Tunnel. The 2016 CMP notes that some of the shafts have been filled in the brick-lined tunnels, but does not identify them (NSW Government Architect's Office, 2016:255). The Canal in Section 10 was relined in 1899 (NSW Government Architect's Office, 2016:122) at which point the shafts in this section may have been infilled as they were no longer required for their original function.

Shaft No. 3 was assessed in 2021 by Artefact as part of investigations relating to the M12 Motorway project. Shaft No. 3 is located to the southwest of the intersection of Wallgrove Road and Elizabeth Drive, outside the Westlink M7 corridor. Artefact undertook a site inspection of Shaft No. 3's ground surface location in 2021, however no physical evidence of the shaft was identified (Artefact Heritage Pty Ltd, 2021:16). It was noted that the top of the Shaft No. 3 was likely to be 1.5 metres below the ground surface (Artefact Heritage Pty Ltd, 2021:18).

The timber beams of Shaft No. 4 are likely to have been installed following construction of the tunnel section in 1888, to seal access to the tunnel from the shaft and/or to stop material falling from the surface into the tunnel itself. The ballast was likely deposited later as part of filling or closing off the shaft, either at the end of the tunnel construction works, or at a later date after the opening of the Upper Nepean Canal System. The sandstock brick structure capping the shaft, noted in the 2002 CMP, may have been retained as part of sealing off the tunnel.

There is insufficient evidence at present as to the shaft's fabric. A contemporary newspaper report notes that while most other tunnels along the Upper Canal System were rock cut, the Cecil Hills Tunnel was cut through loose shale, necessitating the manufacture of bricks on site to line the tunnel (Sydney Morning Herald, 1883:11). It is unknown whether Shaft No. 4 was similarly lined or shored using any other method.

In relation to Shaft No. 4's current fabric and condition, it is unknown if the whole of the shaft has been infilled with ballast, or only partially infilled., There is no record of what occurred with the surface sandstock brick structure that covered Shaft No.4 (as described at Edward Higginbotham & Associates Pty Ltd, 2002: Volume 2, 65)) prior to construction of the Westlink M7, and as such the brick structure may have been retained beneath the modern metal access structure before being covered over during construction of the Westlink M7, or the brick structure may have been modified and replaced with the permanent cover.

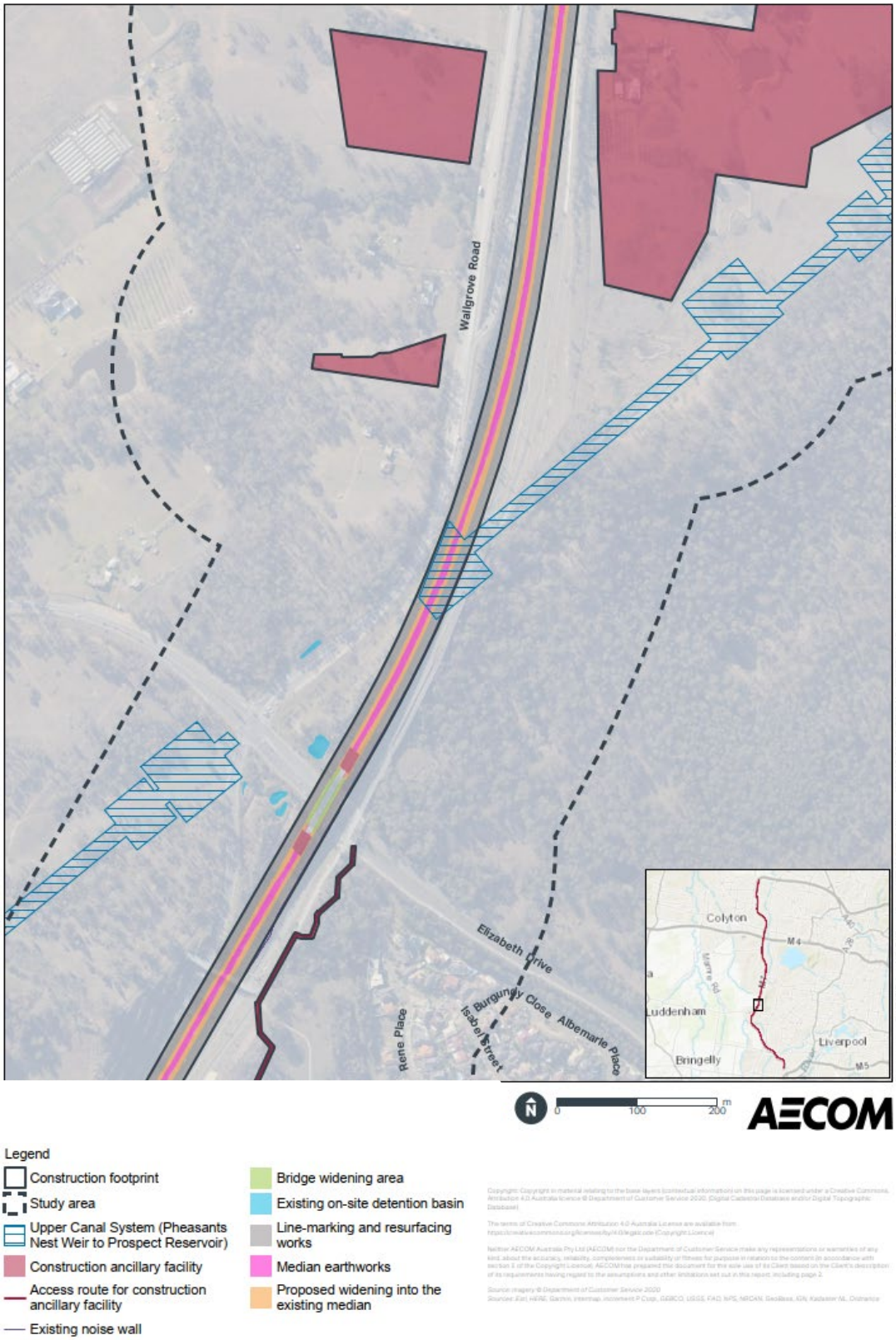

Figure 1 Proposed modification in the vicinity of the Upper Canal System and Shaft No.4

Figure 2 Location of Tunnel Shaft No.4

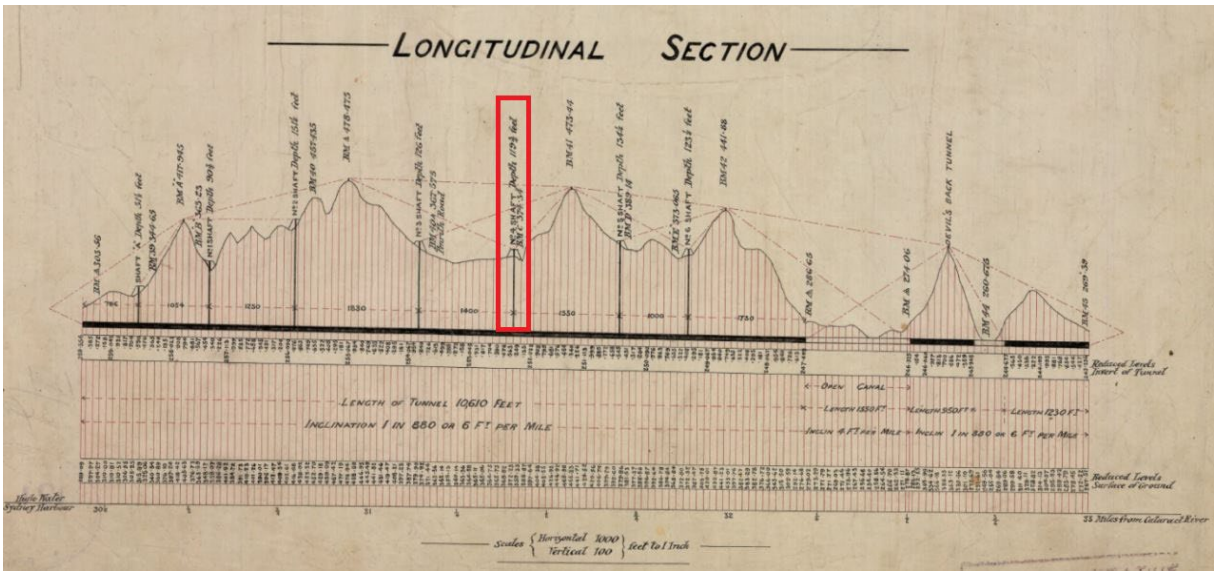

Figure 3: Longitudinal section plan of Cecil Hills, and Devil's Back Tunnel, with Shaft No. 4 highlighted in red (Source: SMEC Australia Pty Ltd, 2019:5

Plate 1 **View of the modern shaft entrance above the Upper Nepean Canal tunnel located in the median of the Westlink M7 (looking west from the southbound lanes of the Westlink M7) (Source: Google Maps, 2021)**

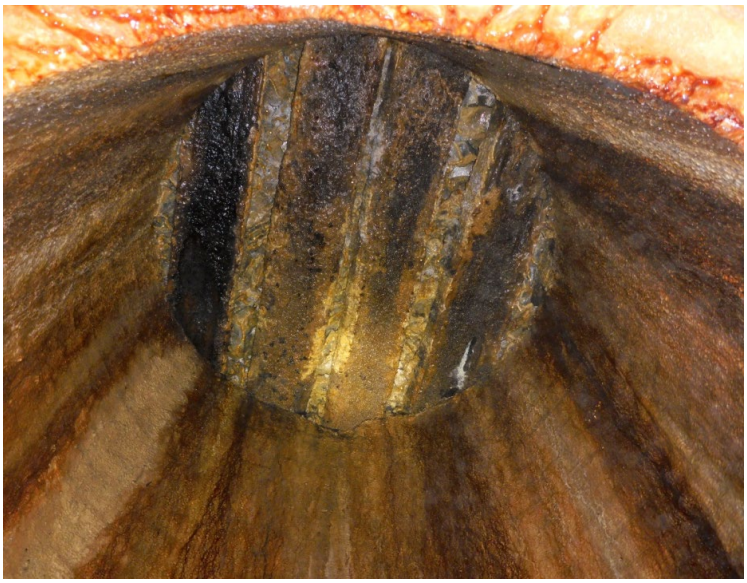

Plate 2 **View of Shaft No. 4 from Cecil Hills Tunnel, looking up (Source: SMEC Australia Pty Ltd, 2019:9)**

Significance assessment – Shaft No. 4

The significance of the whole Upper Nepean Canal has been presented in the Non-Aboriginal technical paper (Appendix J) and will not be reprinted here. Instead, this Addendum assesses specific fabric associated with Shaft No. 4, and the timber and ballast remains.

The 2016 CMP presents a table of elements that defines the significance of the different elements associated with the Upper Nepean Canal. The Cecil Hills Tunnel has been assessed as being of Exceptional significance. The shafts and all associated fabric were not graded individually. Using this same grading table, and given the shaft is associated with the construction of the Cecil Hills Tunnel section, the shaft, including any brick or other lining material, was assessed in the non-Aboriginal technical paper as being of Exceptional significance. The shafts were an integral part of the

construction of the Cecil Hills Tunnel, and therefore the tunnel and the shafts would be considered the same significance level (AECOM Australia Pty Ltd, 2022b).

The timber beams present at the base of Shaft No. 4 were likely added post-construction of the tunnel, when the shaft was no longer used as part of the tunnel construction. It is possible that the timbers were added much later when it was decided to close off or infill the shaft. The presence of the timbers does not indicate that the shaft itself was lined with timber, as the tunnel took many years to excavate, however, as an individual element within the shaft, these timbers would be considered to be of Moderate significance.

The ballast material was likely deposited when the depth of the shaft was required to be made shallower; however, the ballast contributes to a historical phase of the tunnel and shaft construction.. As such, the ballast material is assessed as having Some heritage significance.

Table 1 provides a summary of heritage significance of the shaft, timbers and ballast.

Table 1: Summary of heritage significance

Item name	Item type	Date	Significance
Cecil Hills Tunnel*	Tunnel	1888	Exceptional
Shafts associated with the construction of the Cecil Hills Tunnel	Air Shaft	1888	Exceptional
Timber Beams at the base of Shaft No. 4	Timber Beams	Post 1888 Construction	Moderate
Stone Ballast in Shaft No. 4	Fill Material	Post 1888 Construction	Some

* Graded in the 2016 CMP

Revised impact assessment

Direct Impact

As previously assessed, the proposed modification is not likely to have a direct impact on the Cecil Hills Tunnel of the Upper Nepean Canal System. Design drawings dated to 1888 for the tunnel show the presence of seven air shafts along the length of the tunnel. The canal is the only heritage item that is located within the construction footprint for the proposed modification. The depth of the tunnel varies, as discussed above the Cecil Hills Tunnel runs approximately 30-40 metres below the existing motorway

Plate 3: Embankment of M7 Motorway viewed from Wallgrove Road. This viewpoint is in line with the modern construction over Shaft No. 4 shown in Plate 1 (Source: Google Maps)

The construction of the proposed modification in this location would require excavation to a depth of up to one metre and would be contained within the current median area between lanes of traffic either side. Although the depth of the tunnel has not been confirmed by Water NSW, an earlier assessment of the tunnel indicates it is approximately 30 metres below the ground's surface and that the shaft is

33.8 metres deep (NSW Roads and Maritime Services, 2019:88). Consequently, direct impacts are not anticipated on the tunnel structure as a result of the construction of the proposed modification.

Shaft No.4 is categorised as “Ancillary Facilities, Structures and Infrastructure” of the Upper Canal System (E. Higgenbotham, 2000) (NSW Government Architect’s Office, 2016:136). The shafts themselves form part of the tunnel fabric, and are therefore considered to be of Exceptional heritage significance (NSW Government Architect’s Office, 2016:255).

As noted in the SMEC condition assessment, the air shaft is described as having a diameter of 1.4 metres, with 1.5 metres cover to the fill material. The fill is described as comprising ballast, supported by timber beams. Although the timber beams have been present at least since completion of its construction, it was the opinion of SMEC in 2019 that weathering of these beams may eventually result in their deterioration (SMEC Australia Pty Ltd, 2019:9).

As such, the works would not have a direct impact on the Shaft No. 4.

Indirect

Indirect impacts often arise from the potential for vibration and/or visual impacts to a heritage item. The Cecil Hills Tunnel and Shaft No. 4 are located below the current Westlink M7 and proposed widening area, therefore only potential vibration impacts have been assessed as part of this indirect impacts assessment.

A separate Noise and Vibration technical paper was prepared for the Westlink M7 Modification Report (Appendix E) (AECOM Australia Pty Ltd, 2022a). The vibration assessment assessed the construction vibration potential based on both structural damage standard guidelines:

- Heritage structures – German Standard *DIN 4150 – Part 3 – Structural Vibration in Buildings – Effects on Structures* (DIN 4150)
- Non-heritage structures – Evaluation and Measurement for Vibration in Buildings Part 2, (British Standard (BS) 7385:Part 2-1993) (BS 7385).

The construction vibration resist assessment prepared in the report presented minimum working distances for equipment, that are specific to heritage items (based on acceptable vibration levels as outlined in the DIN 4150 Standard). The results specific to heritage items are presented in Table 2.

Table 2: Recommended minimum working distances from heritage items for vibration intensive plant

Plant item	Rating/Description	Minimum working distance*
		Cosmetic damage (DIN 4150) Heritage and other sensitive structures
Vibratory Roller	< 50 kN (Typically 1-2 t)	14 m
	< 100 kN (Typically 2-4 t)	16 m
	< 200 kN (Typically 4-6 t)	33 m
	< 300 kN (Typically 7-13 t)	41 m
	> 300 kN (Typically 13-18 t)	54 m
	> 300 kN (> 18 t)	68 m
Small Hydraulic Hammer	(300 kg - 5 to 12 t excavator)	5 m
Medium Hydraulic Hammer	(900 kg – 12 to 18 t excavator)	19 m
Large Hydraulic Hammer	(1600 kg – 18 to 34 t excavator)	60 m
Vibratory Pile Driver	Sheet piles	50 m
Pile Boring	≤ 800 mm	4 m
Jackhammer	Handheld	2 m

** Damage to heritage and other buildings is unlikely to occur when the management measures have been implemented appropriately. Refer to mitigation measures relating to vibration management below.*

The proposed works associated with the widening in this area of the Westlink M7 would occur within five metres from the current concrete cap of the shaft, located in the existing median. AECOM estimates that the height of the current Westlink M7 carriageway is built up approximately 5-10 metres above the pre-M7 ground level, based on field inspection(refer to Plate 3). This means that the current concrete cover above Shaft No. 4 is 5-10 metres above the original surface cap to the shaft.

The distance of the timber remains within Shaft No. 4 to the current concrete cover on the surface in the median of the Westlink M7 is believed to be at least 30 - 40 metres below the current Westlink M7 road surface. The condition of the shaft, and if it has been completely infilled or not, is still unknown. It is possible the shaft was brick lined from the surface down to the solid rock, and is still present within the shaft space, regardless of whether the shaft has been completely infilled.

As there is around 30-40 m (depth) between the current Westlink M7 road surface and the timber beams at the base of the Shaft No.4, the construction work for the proposed widening would have to limit the type of plant in the immediate vicinity of the Shaft No .4 to be in accordance with Table 2 so as to avoid the potential for cosmetic damage to the timber beams associated with Shaft No. 4 of the Cecil Hills Tunnel.

Potential vibration impacts may occur to fabric associated with the shaft, including any surviving lining material. The closest point of any works to this material would be approximately 5-10 metres. According to the data presented in Table 2, a vibratory roller less than 1 to 2t would be needed to work in this area, or other specialist vibrating rolling equipment would need to be investigated that reduces vibration during construction.

The construction vibration assessment included mitigation measures for vibration impacts. The assessment stated that:

> *Works undertaken within minimum working distances for cosmetic damage may cause damage to buildings. However, damage to heritage and other buildings is unlikely to occur when the management measures have been implemented appropriately. These measures*

include undertaking attended vibration measurements at the work site when work commences, to determine site specific minimum working distances. These measurements would be made progressively at distances outside the minimum working distances to ensure no structure damage occurs and would provide detailed information regarding the transmission of vibration to allow site specific safe working distances to be determined.

The inclusion of the vibration mitigation measures during construction, following the guidelines outlined in the vibration assessment (as specified in Table 2), would ensure no structural damage occurs to the shaft. Provided that these mitigation measures are followed, there would be no indirect impacts to the item.

Potential for Changes to Heritage Fabric

The preferred method for undertaking the construction works is to minimise impacts to the Upper Nepean Canal System, including all fabric associated with Cecil Hills Tunnel and Shaft No. 4. The modification does not propose to alter any fabric associated with Cecil Hills Tunnel, or Shaft No. 4. No options analysis or other considerations have been undertaken to alter or replace fabric, including the timbers.

Compliance with relevant Conservation Management Plans

As an item of State heritage, the Upper Canal System has a CMP governing appropriate management measures for works within its curtilage. The 2016 CMP is an updated version of a CMP prepared in 2002 by Edward Higginbotham & Associates (Edward Higginbotham & Associates Pty Ltd, 2002; NSW Government Architect's Office, 2016).

The table below was presented in the non-Aboriginal technical paper to the Modification Report (Appendix J), and has been amended based on the additional assessment for the Shaft No. 4 above. These amendments are presented in underline text.

Table 3 sets out the policies within the CMP which are relevant to works in the vicinity of Shaft No. 4.

Table 3: Summary of relevant policies for Shaft No. 4

Policy number	Policy and reference	Comment
Policy 1	The following aspects of the Upper Canal are integral to the significance of the place. Manage them to ensure they are conserved and that their heritage values are retained. These elements are ranked as having Exceptional or High heritage significance. (NSW Government Architect's Office, 2016:27)	As noted in the Technical Report, Shaft No. 4 (including all fabric), is considered to be part of the original fabric of the Canal and is therefore of exceptional heritage significance. The heritage significance of Shaft No. 4 must therefore be conserved.
Policy 3	Retain all elements of Exceptional Significance as a priority. - Aim to retain all original fabric of elements of exceptional significance as a first conservation option. - Avoid adding new fabric, where this will result in a negative impact on significance. (NSW Government Architect's Office, 2016:29)	All works within the vicinity of Shaft No. 4 should avoid its original fabric.

Policy number	Policy and reference	Comment
Policy 5	Retain a representative sample of elements of Moderate Significance	All timber beams located at the base of Shaft No. 4, above Cecil Hills Tunnel should be retained. It is not possible to only keep a sample of these timbers without potentially impacting on other significant fabric items.
Policy 6	Elements of Little Significance These elements can be demolished or removed to reveal significant fabric or as required, provided that their removal would cause no damage to adjacent significant fabric. These works would not detract from the significance of the Canal.	The ballast material will not be removed.
Policy 35	Make decisions requiring change to the Upper Canal with a clear understanding of the implications for the identified heritage values of the Canal and seek to minimise negative heritage impacts. (NSW Government Architect's Office, 2016:42)	This Heritage Impact Assessment (HIA) has demonstrated a clear understanding of the heritage values of the Upper Canal and Shaft No. 4. Although works are taking place within the curtilage of the Upper Canal System, the design of the works have ensured that they will not cause negative impacts. This includes enacting controls to avoid indirect vibrational impacts that may occur during construction works immediately adjacent to Shaft No.4.
Policy 37	Prepare a Heritage Impact Statement for all works requiring an exemption notification or application for approval under the NSW *Heritage Act 1977.* (NSW Government Architect's Office, 2016:43-44)	This HIA (and addendum) is sufficient to append to a s60 permit or exemption. However, as the proposed modification is part of a project designated as SSI, no permit under the *Heritage Act 1977* is required.
Policy 40	Undertake formal archival recording in accordance with NSW Heritage Council guidelines when undertaking major changes to elements of Exceptional and High heritage significance. (NSW Government Architect's Office, 2016:45)	Although the works would not cause major changes to the Cecil Hills Tunnel or the exceptional heritage fabric of Shaft No. 4, works would alter its setting. It is therefore recommended that formal archival recording is undertaken of the current setting and elements subject to change as a result of the proposed works in the vicinity of Shaft No. 4.
Policy 41	Keep and archive ongoing, informal records of changes to the Canal. (NSW Government Architect's Office, 2016:45)	A copy of this report should be kept evidencing the change in landscape surrounding the Shaft No. 4.

Policy number	Policy and reference	Comment
Policy 42	Ensure that operational documents for the Upper Canal are archived in the Sydney Water/Water NSW Joint Archive and Research Facility as part of the historical record of the activities of Water NSW and the role and function of the Upper Canal and Upper Nepean Scheme. (NSW Government Architect's Office, 2016:45)	A copy of this report should be forwarded to the Sydney Water/Water NSW Joint Archive and Research Facility.
Policy 43	Obtain any necessary heritage and planning approvals or exemptions prior to undertaking changes to the place. Carry out the works in accordance with any conditions placed on these approvals. (NSW Government Architect's Office, 2016:47)	As the proposed modification is part of a project designated as SSI, a s60 permit would not be required.
Policy 45	Retain and conserve *in situ* elements of Exceptional significance which are presently redundant or may be identified as redundant during the life of this CMP. (NSW Government Architect's Office, 2016:49)	The original fabric of Shaft 4 would be retained *in situ.*
Policy 51	Ensure new buildings or structures are unobtrusive and set back from elements of exceptional significance where those structures would have a negative visual or physical impact on those elements. (NSW Government Architect's Office, 2016)	All of the works within the vicinity of Shaft No. 4 will be "at-grade" and therefore would not cause a visual or physical impact.

Summary

The current Westlink M7 road level is around 5-10 metres above the former ground surface, therefore, the top of the Shaft No. 4 is at least 5-10 metres below the current road level, and the timber beams within the base of the shaft are at a depth of at least 30-40 metres. It is not known if the entirety of Shaft No. 4 has been infilled, or only partially, but it is likely that the ballast was added after the construction and operation of the Upper Nepean Canal. It is also not known if the original shaft wall fabric was timber or brick, and if that material remains within the tunnel.

The shaft, as an element itself, is considered to be of Exceptional significance due to its direct association with the construction of the Cecil Hills Tunnel. The timber beams are considered to be of Moderate significance, as they relate to the later closing of the shaft. The ballast material inside the shaft is considered to be of Some heritage significance.

The construction vibration assessment Technical Report (AECOM Australia Pty Ltd, 2022a) outlined safe operating distance for heritage items to minimise indirect (vibration) impacts. Based on the approximate distance from the proposed construction works to the both the top of the original shaft, and to the timber beams below, safe operation procedures would need to be enacted during construction to ensure vibration impacts are avoided.

Changes to mitigation and management measures

The Non-Aboriginal technical paper (AECOM Australia Pty Ltd, 2022b) included recommendations for minimising potential ground vibration impacts to the Upper Nepean Canal System tunnel. In addition to these recommendations, it is proposed to add the following recommendation relating to the detailed design of the works and any subsequent updated vibration assessment.

Table 4: Addition to existing mitigation and management measures

Reference	Mitigation and management measure	Responsibility	Timing
Indirect impacts to Shaft No. 4	Any proposed changes to the design or construction methodology in the vicinity of Shaft No. 4 are to be reviewed by a suitably qualified heritage specialist to assess any changes to potential indirect vibration impacts.	Construction Contractor	Detailed Design Construction

Yours faithfully

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